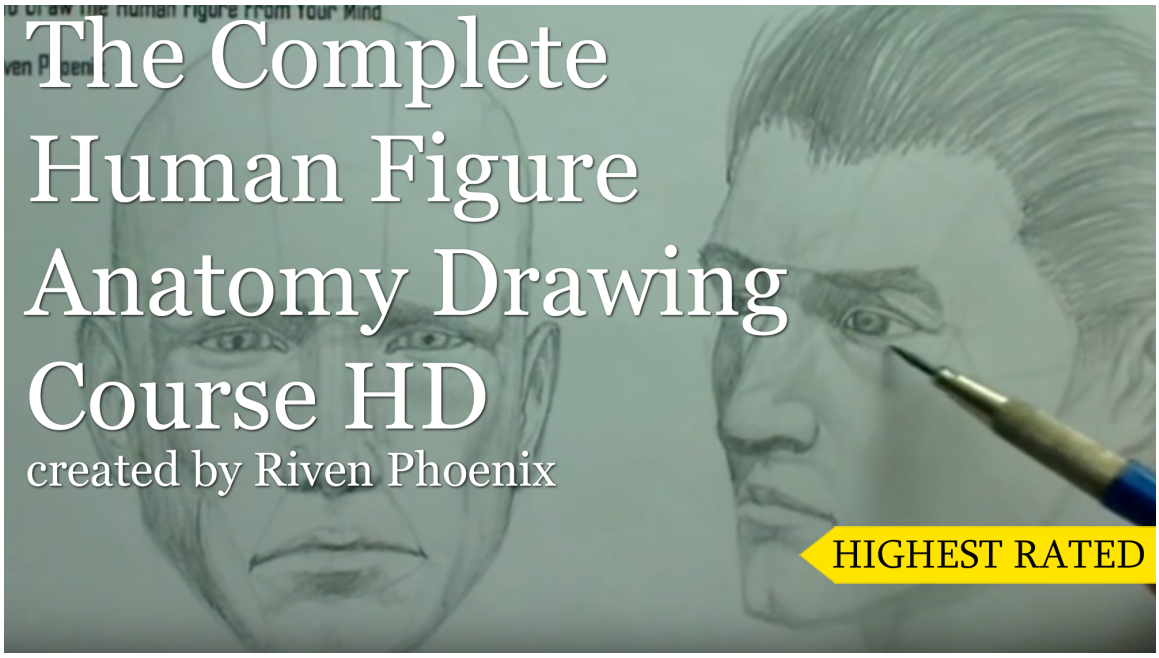

The Structure of Man

Learn to Draw the Human Figure From Your Mind with Riven Phoenix

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Figure Drawing Lesson 060 - The Formulas of the invention of Humerus

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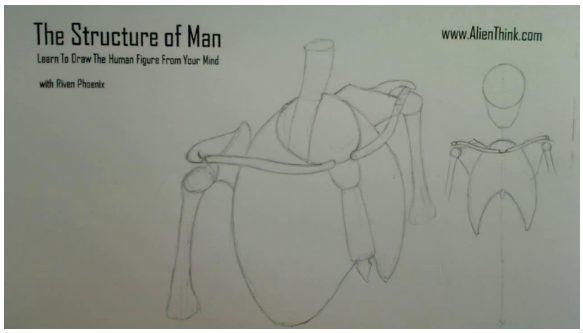
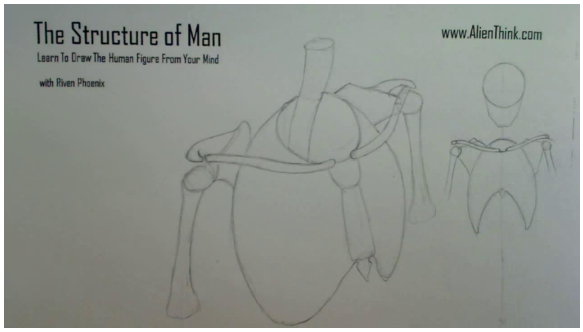
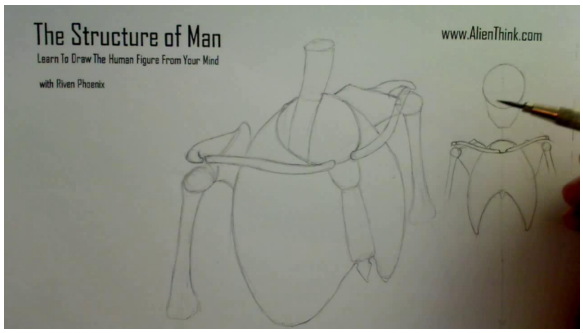
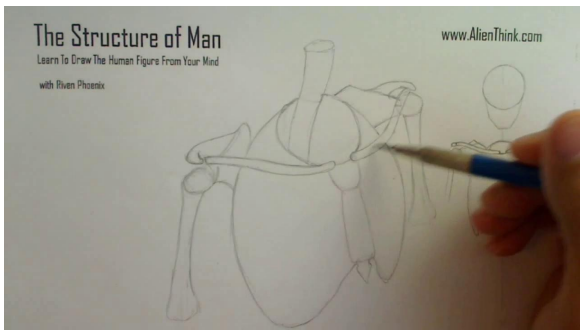
1		Hey guys, my name is Riven Phoenix and welcome to the structure of man who learns to draw
2		the human figure from your mind-training course.
3		Okay, so in the previous lesson we had looked at really how simple the clavicle was and
4		really understanding the purpose of its design as to why it was keeping in mind that it

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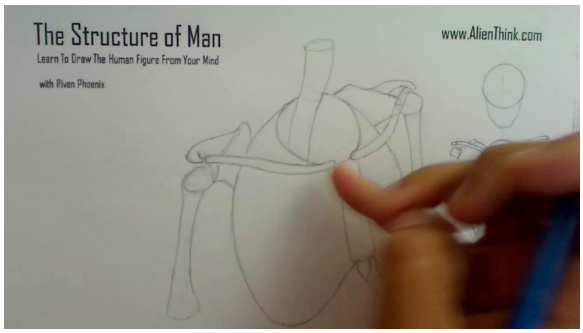
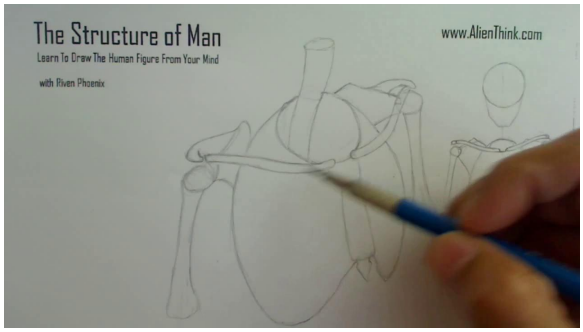
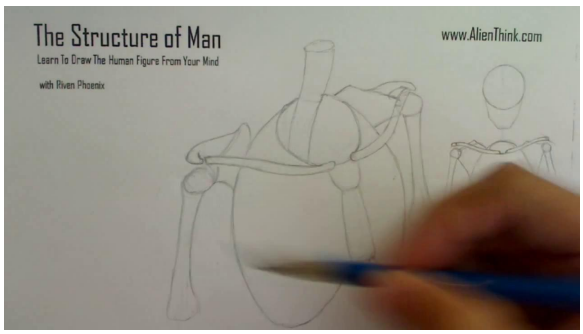
5		really is a clue as to knowing how in the chest the pack must always going to be in front
6		and the way it's designed, it's throwing back the shoulder over here, right?
7		So this is why you get that curve, right?
8		So always keep that in mind and we also had looked at what was going on over here.

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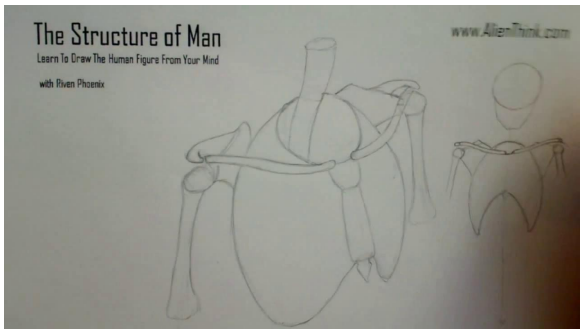
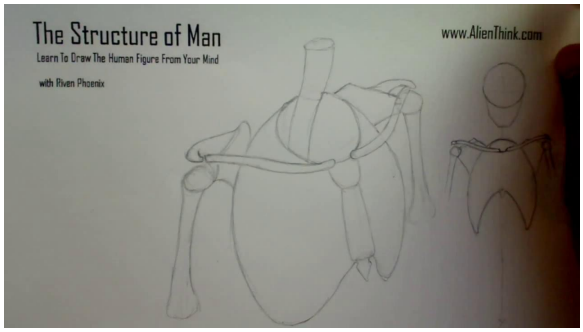
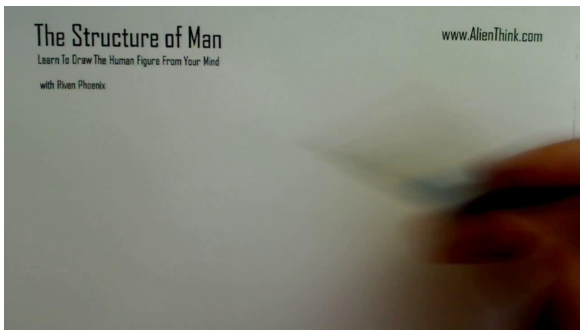
9		So now we're going to take a look at this bone here, which is the humerus, right?
10		So we're really almost done with the skeletal structure.
11		So to understand the humerus bone, it's going to be actually very simple.
12		So to do that, here we're going to first draw out a very simple formula method that will

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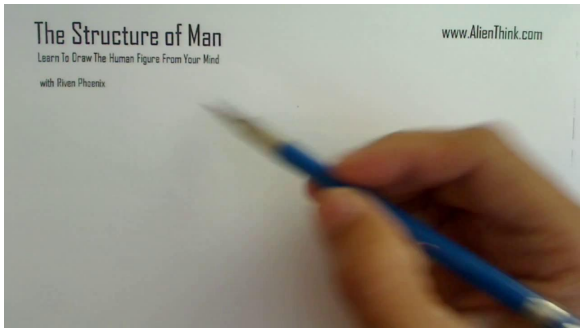
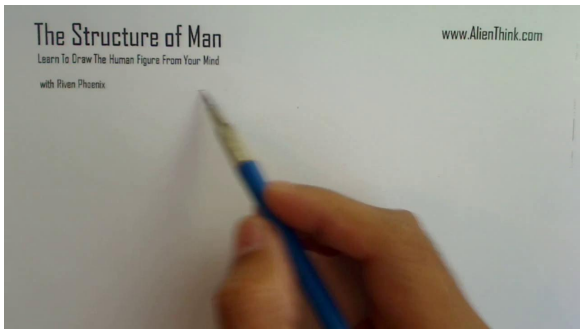
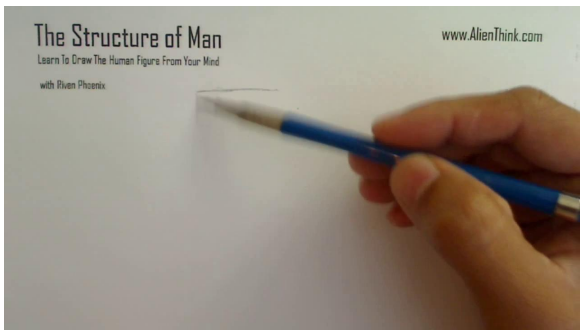
13		allow us to draw the humerus bone in freehand and again, there's really not much to understand
14		about other than its characteristics.
15		So here I'm going to draw out, let's say here, we can do it about this big, we'll draw
16		out a box that's going to be kind of long here and it's going to go, let's say, down.

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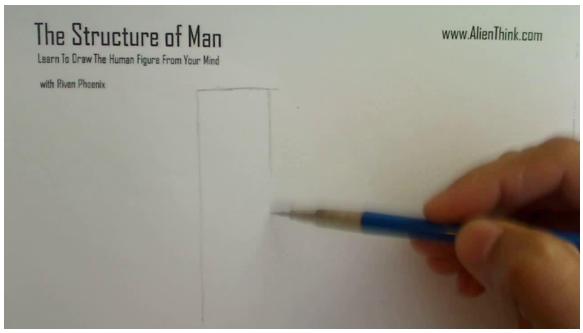
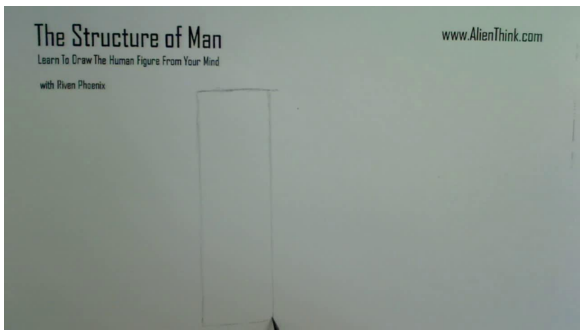
17		So it's not going to be really this wide here, so I'm going to cut it just a little bit
18		over here to give it a better design.
19		So here I'm just going to go all the way down over here like this and here, basically
20		just stop on the end.

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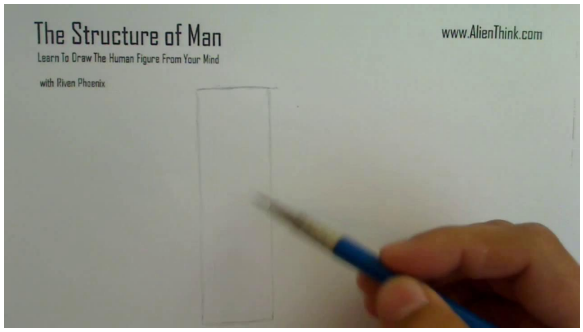
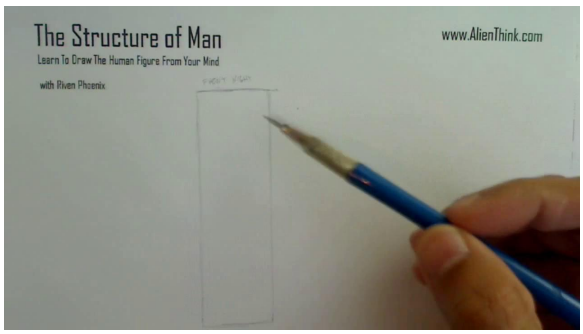
21		So we already know how big this is going to be based on our tool kit.
22		So to understand the humerus bone, what we're going to do is first look at the front,
23		the front right of this bone structure, right?
24		So first we'll divide this in half over here.

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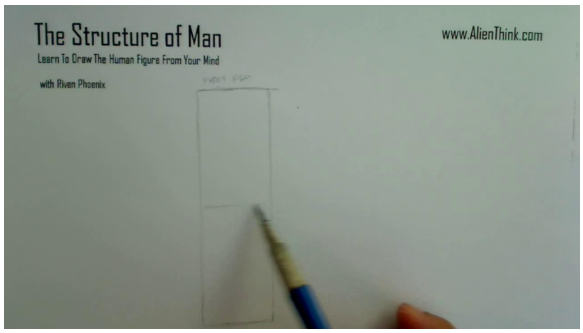
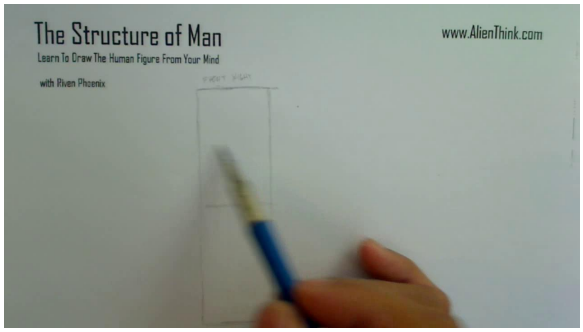
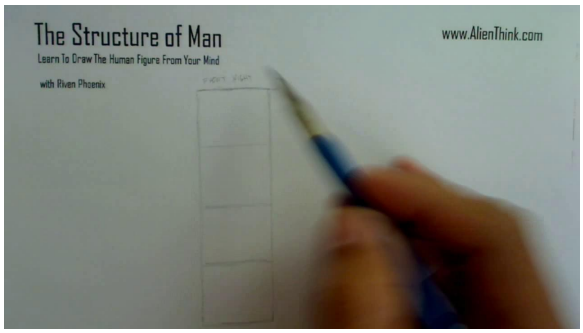
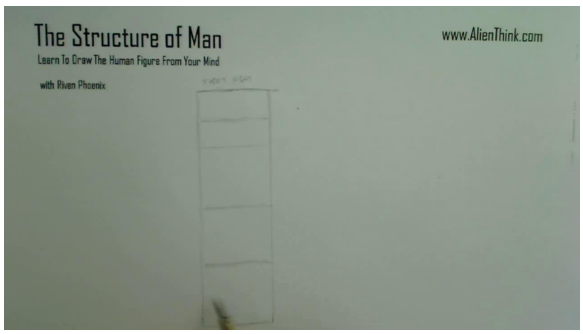
25		This will be like our marker to understand what happens in the halfway point and then
26		just divide it over here and then just divide it over here.
27		So when you come over here, we're going to divide this in half a little bit like this
28		and we're going to also divide this half in a little bit over here like this.

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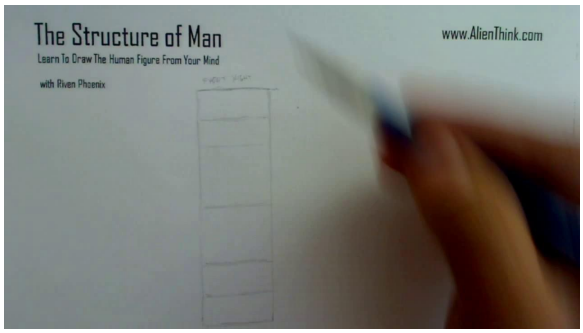
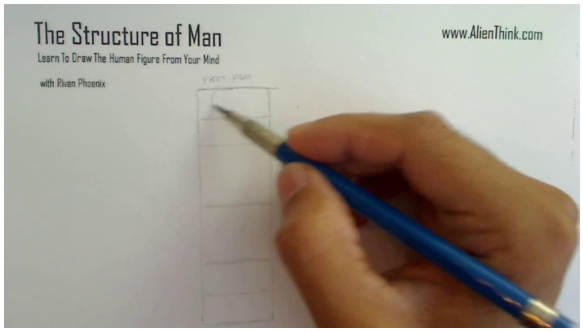
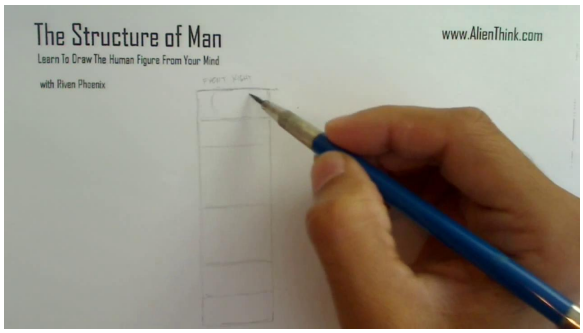
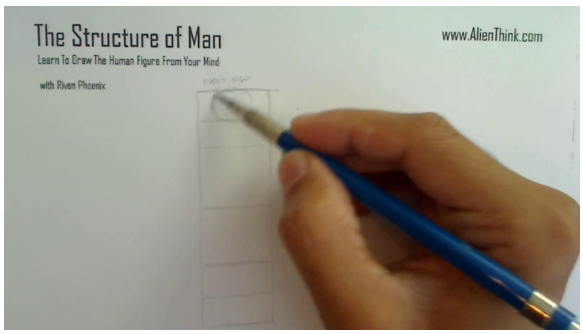
29		So to get the concept of the humerus bone from the front, basically we need to make a circle
30		and notice that we're inside here and we're inside here.
31		We're going to make this ball joint of a shape that's really just going to be like this.
32		So you can make it like this nice oval circle like this.

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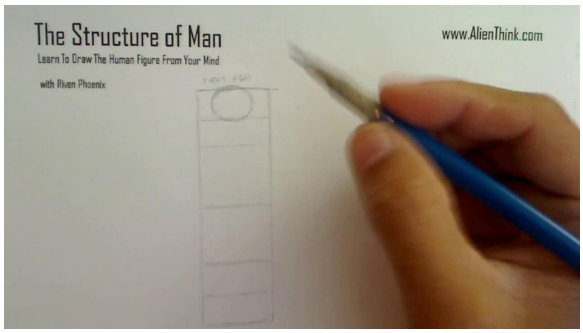
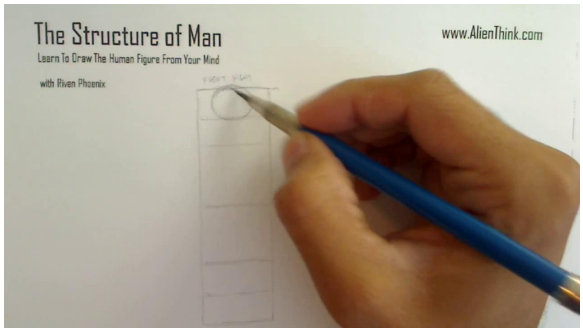
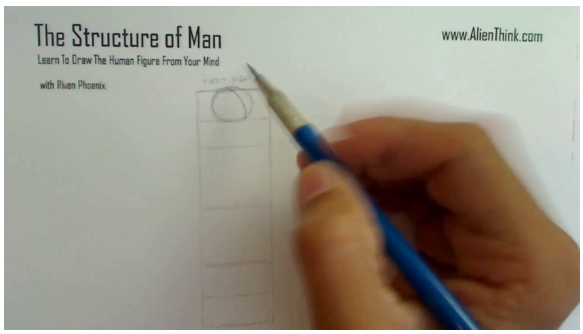
33		So what happens is that when we're looking it from the front, you're going to get this
34		curve here like this.
35		So it's kind of like a twisted idea that this is facing kind of like on this angle.
36		So your scapula is going to be right over here and this ball joint, the socket, is going

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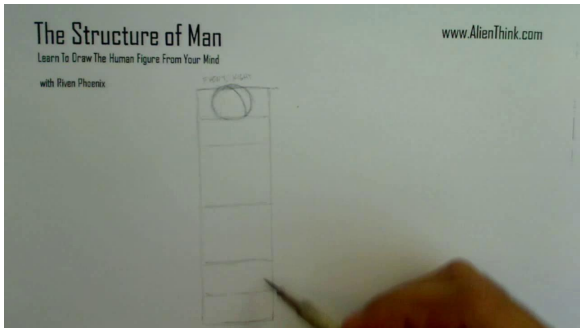
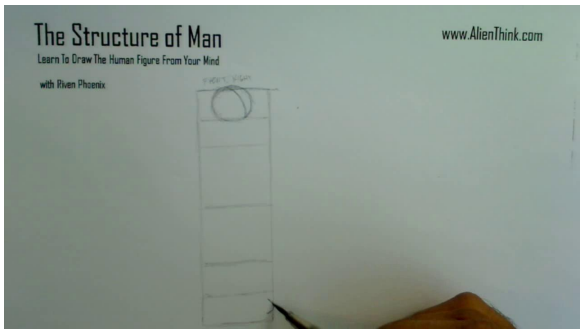
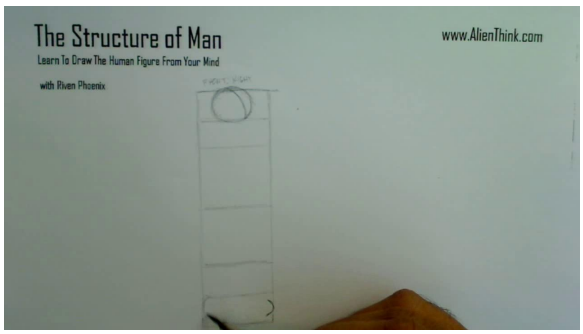
37		to attach to it inside it over here.
38		And on the bottom, what happens is that over here, you're going to get this point here.
39		You're going to get this nudge over here and then over here, you're simply going to
40		get this curvature.

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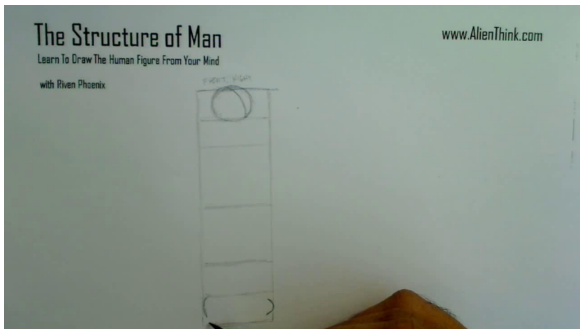
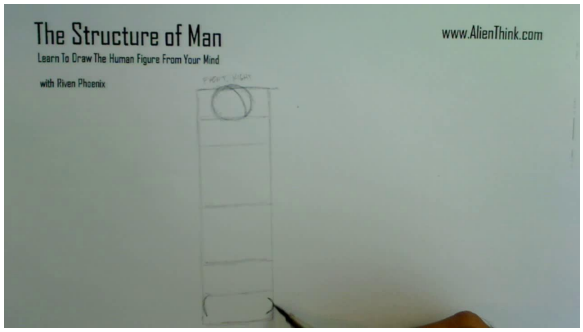
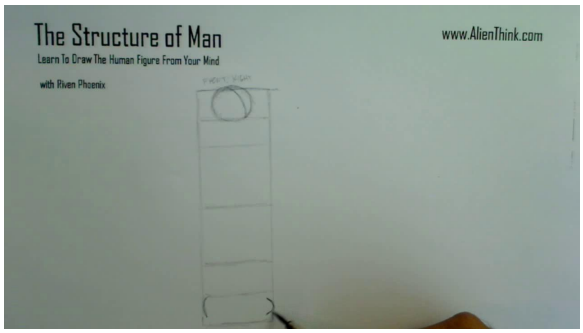
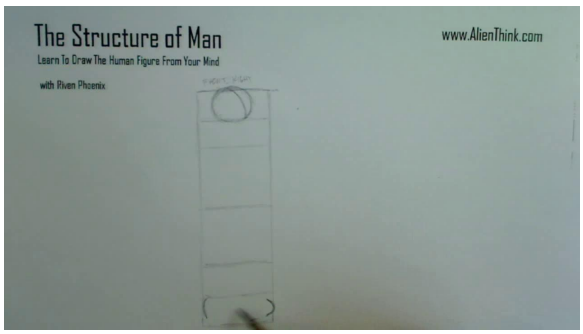
41		Notice that I'm up above here a little bit, right?
42		So this nudge here is going to be very important because this is like your funny ball.
43		And this thing makes an impact in the surface anatomy when you're drawing out the arm and
44		where the elbow is going to be, you're always going to get a little point here in the surface

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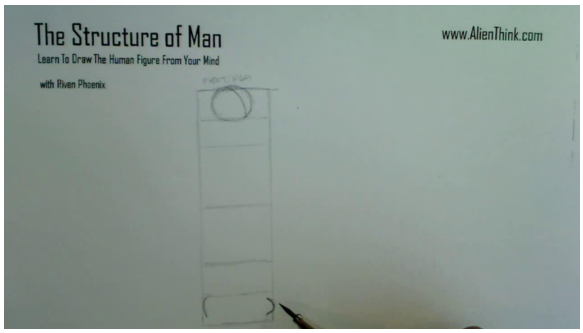
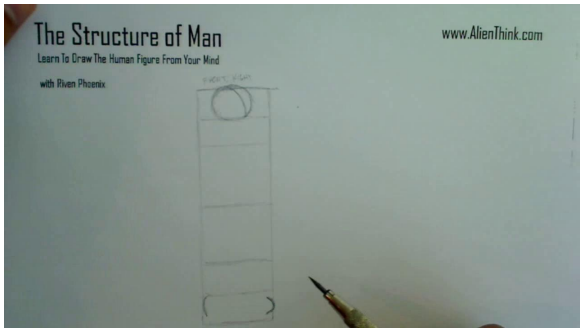
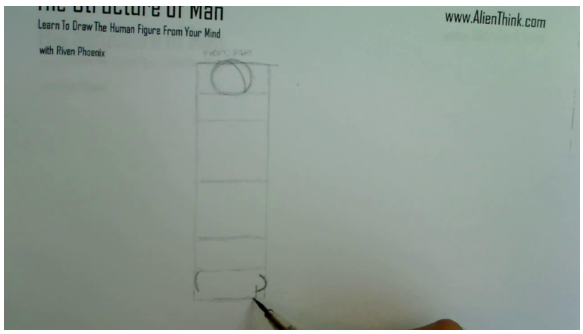
45		of the nudge.
46		So what happens is that when this thing comes out, basically, you're going to get, this
47		is the front view, you're going to get this very sharp point here, this kind of like this
48		nudge here.

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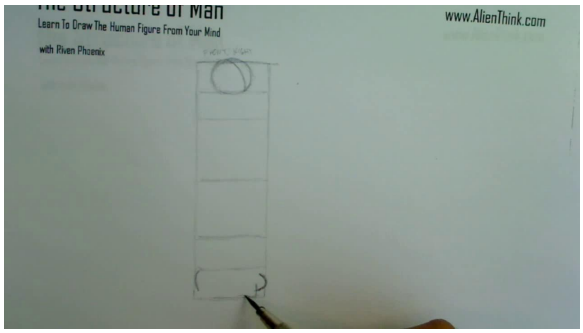
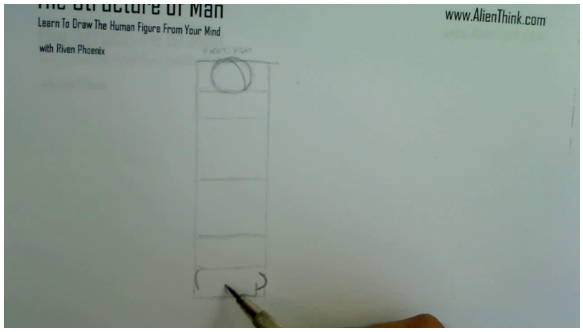
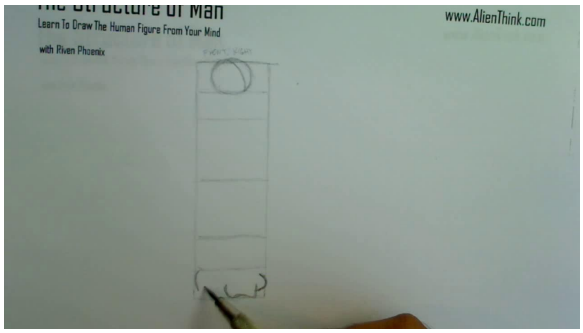
49		And it's going to go like this.
50		It's going to be like this over here, it's going to go here, it's going to be like this
51		and then you'll get like another bump.
52		So this is really an idea to understand that this is like a very fluid mechanism that

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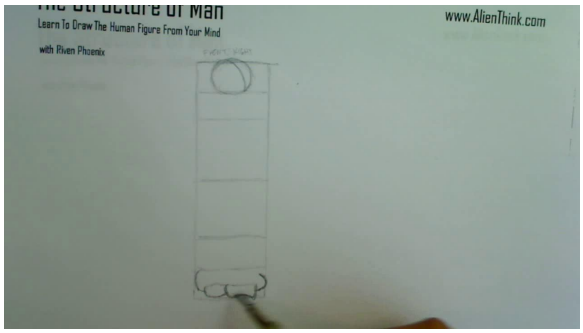
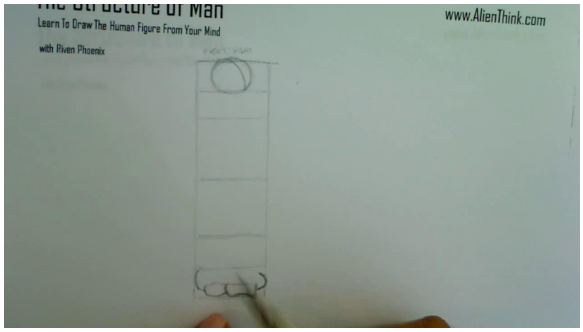
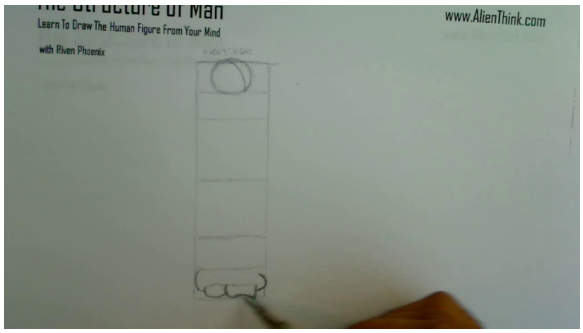
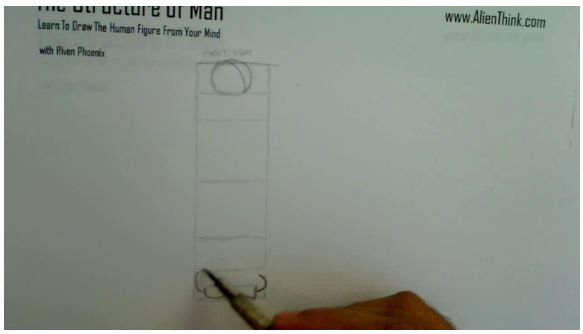
53		allows the elbow, the other bone that we're going to take a look at, it's going to be connected
54		that will allow the elbow to go up and down, but this is just soft, very fluid surface
55		over here.
56		So basically, all there is to understand about this is that this is just going to go

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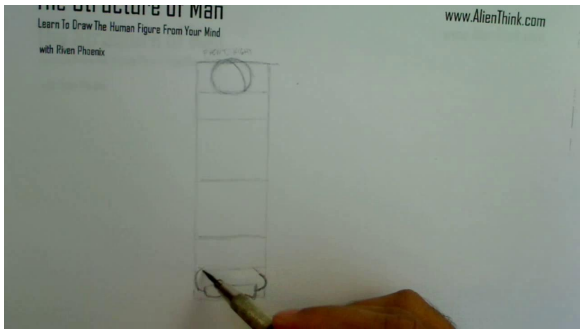
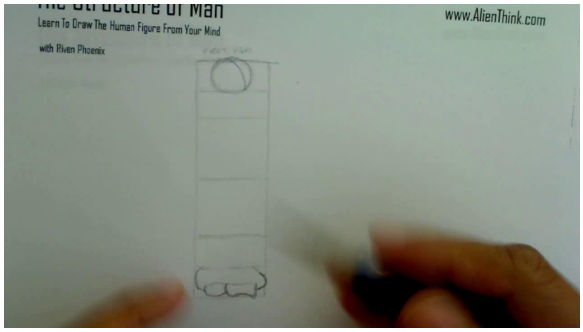
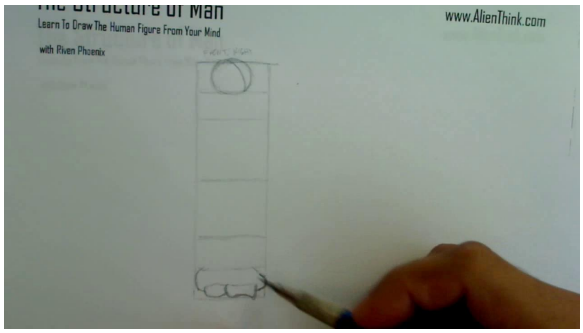
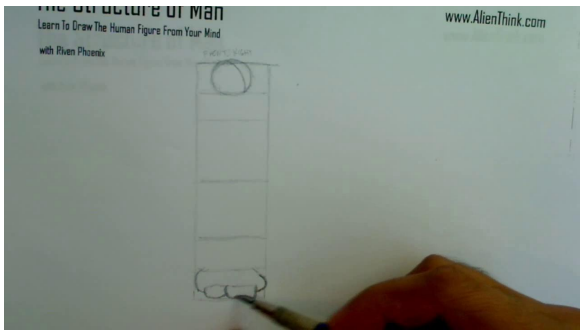
57		like this.
58		So notice that it's wider here and it's shorter here.
59		So this really doesn't matter, only in the bone structure it matters to us over here.
60		But this is going to matter in this because what's going to happen is that if your arm

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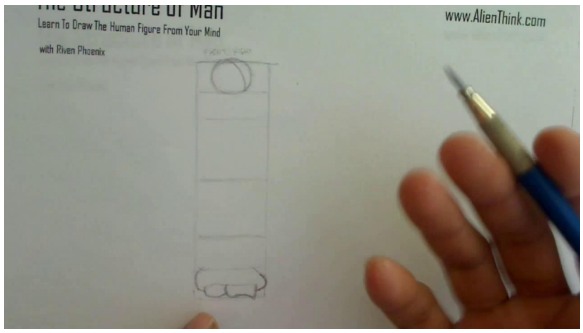
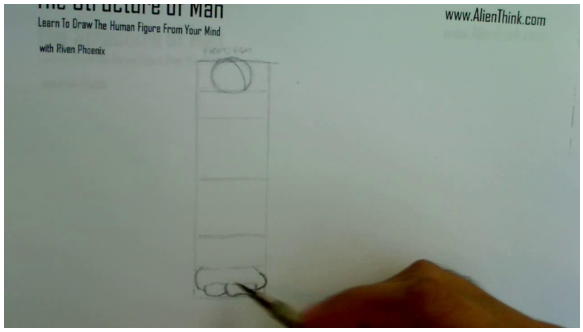
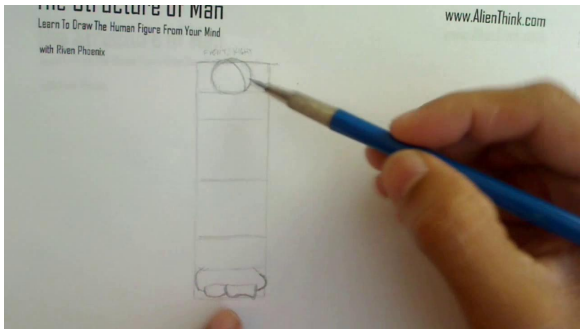
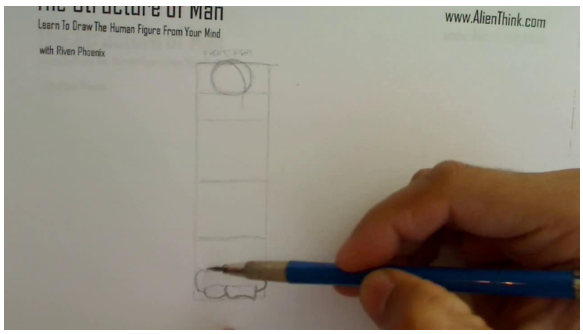
61		is in some kind of a perspective thing, you just want to understand, okay, which way
62		really is the elbow pointing, the elbow is on the other side.
63		So basically to finish this off, what we want to do is connect this over here to here
64		and we want to connect this from here to here.

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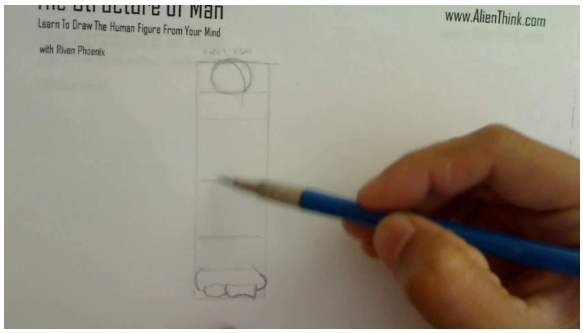
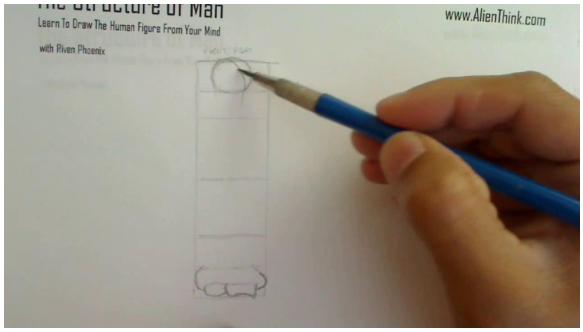
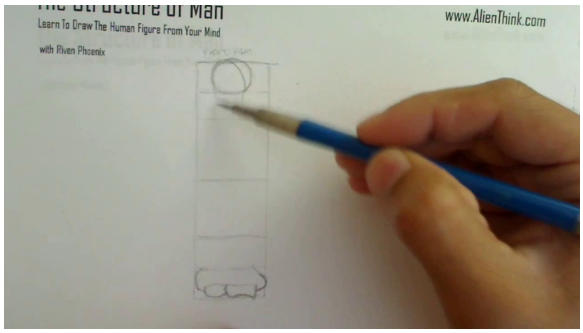
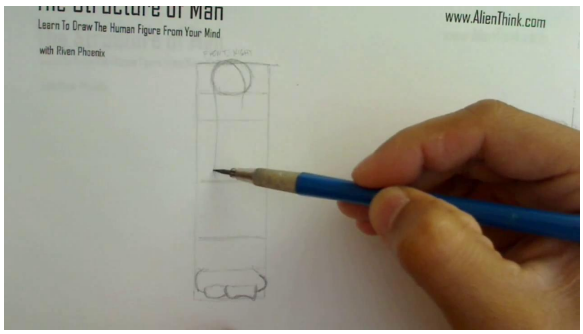
65		But the thing to understand about this is that when this thing goes, remember this is
66		facing this way.
67		So it's really going to come down over here and it's going to have this light nudge,
68		it's going to have like a small mountain hill and then it's just going to connect back

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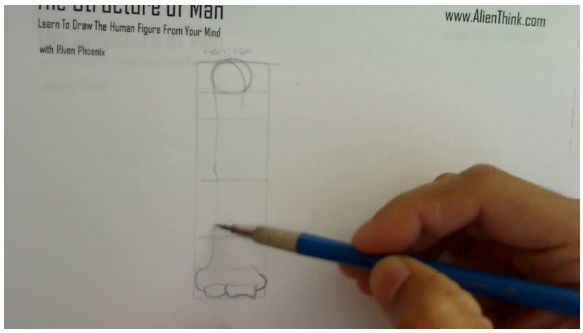
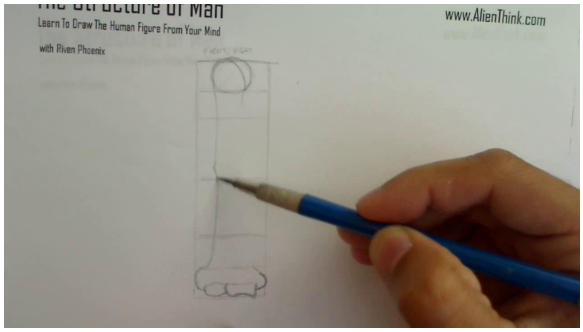
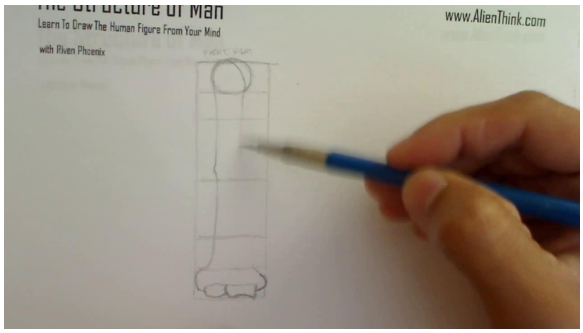
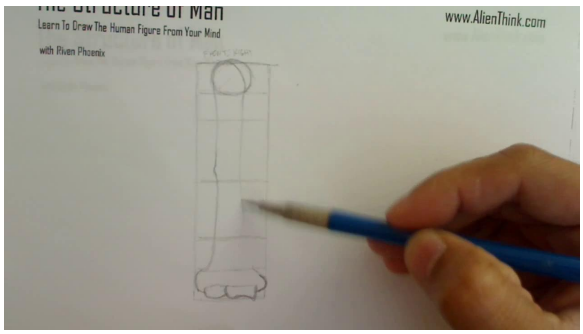
69		over here.
70		Right, it's going to have this nudge.
71		And this thing will go down here and because this is, for this nudge it's just going to
72		be like this, right, there's really nothing more to this than this.

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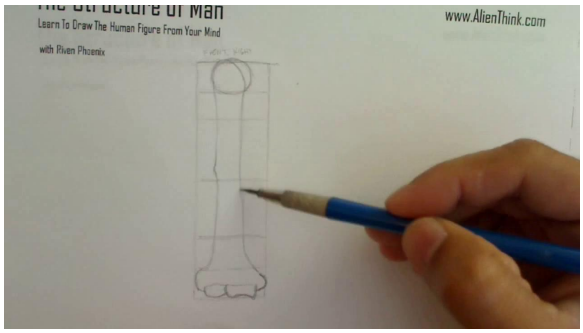
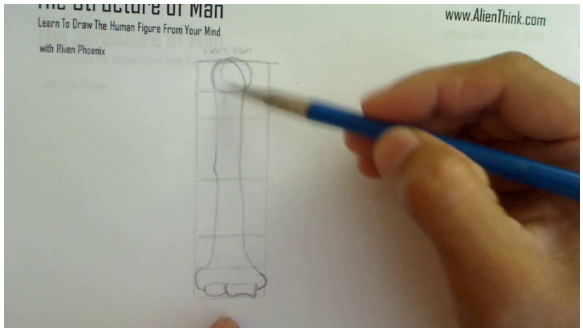
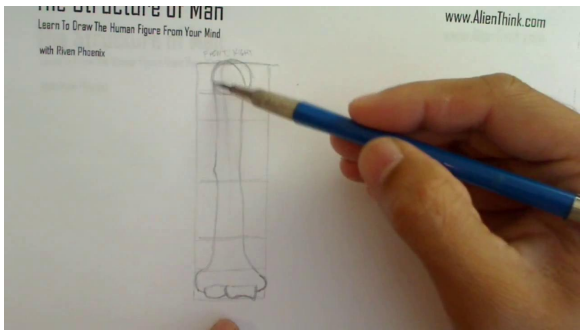
73		So here we've kind of drawn it in this way, okay, so here you can also like draw out this
74		line here if you want it to, but really doesn't matter.
75		Does it like getting more into the details of the bone?
76		But this is the basic conceptual idea of it, right?

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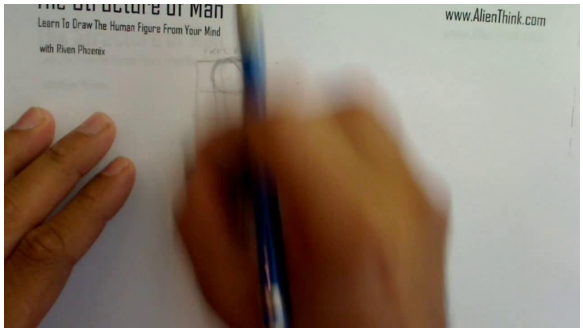
77		So if I erase all these lines, we'll start to see how we can begin to comprehend this
78		idea and be able to draw this free hand and letting go of the formulas, right?
79		Always remember that the purpose of the formulas, right, is meant to be forgotten.
80		All the formulas are meant to be forgotten.

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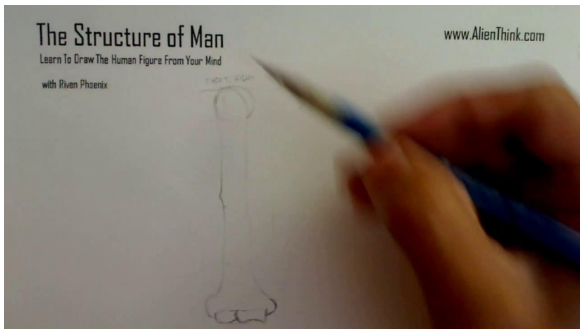
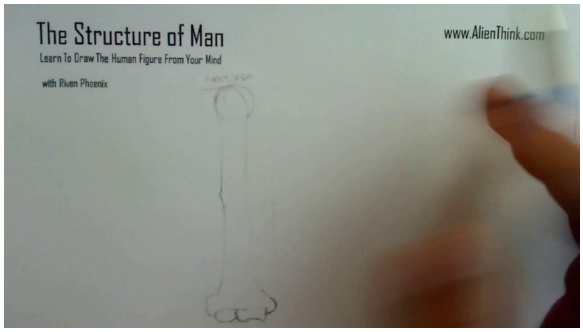
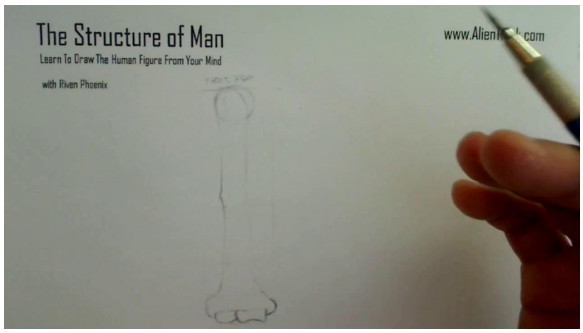
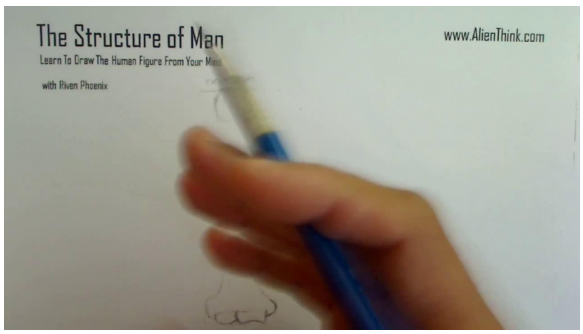
81		They're only here to help us force the idea to understand, right?
82		And it was only in the case of the structure of the human head is where we simplified the
83		formulas, right?
84		But everywhere else, we don't really need the formulas, we only need the ratios and

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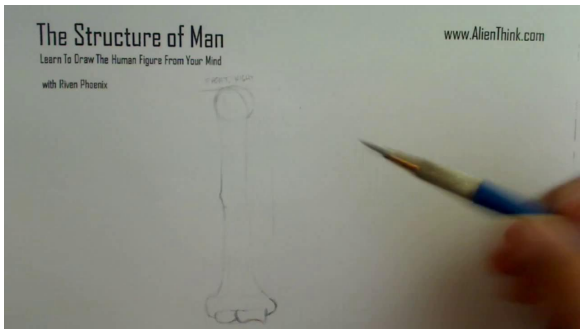
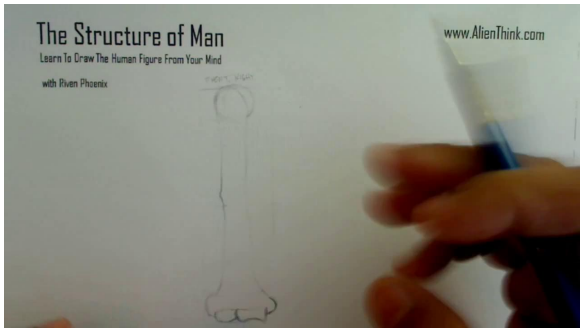
85		the divisions and everything else.
86		Even when it came down to the foot, it was to force the idea, right?
87		So obviously you're not going to draw the human figure with grids, right?
88		So here you can see that when we just go over this and with free hand, so

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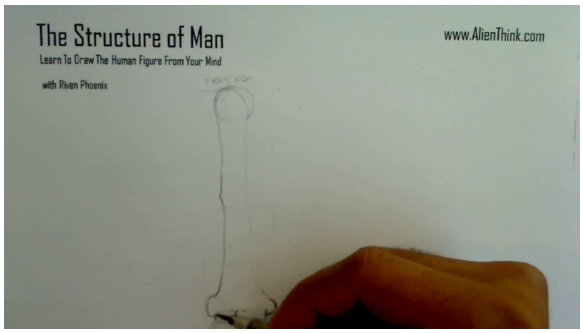
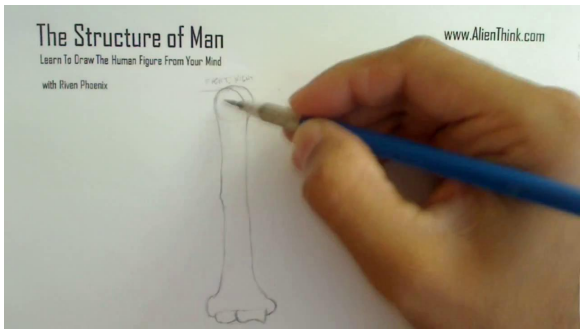
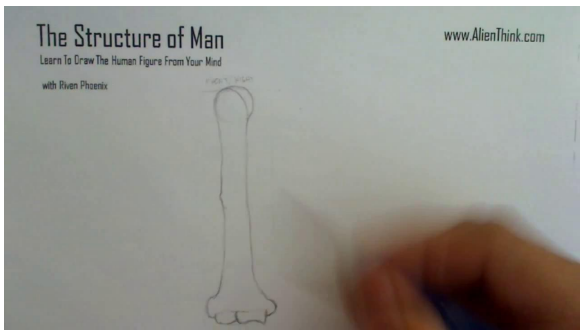
89		we're just drawing out this idea here, this, going like this, we'll be able to draw
90		out our own version of the bone structure here, right?
91		We've invented the humor response.
92		So if we had to draw this out free hand, it's obviously just going to be like this.

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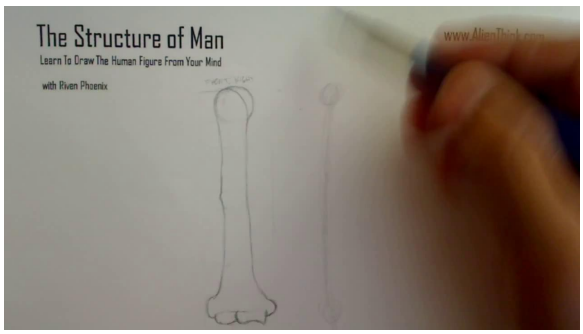
93		So let's say if in a gesture drawing system, we did this and
94		let's say this was the front view and we had made, if we're like magnifying the
95		gesture system, we did this and we did the arm going, let's say down in this way.
96		We can now just simply look at this and say, okay, I know about the humor's bone.

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97		It's really just going to be coming this way here.
98		We know about this line over here and it's really going to be this bump here.
99		See where this is?
100		It's a little bit in the center, so it's going to be this bump here.

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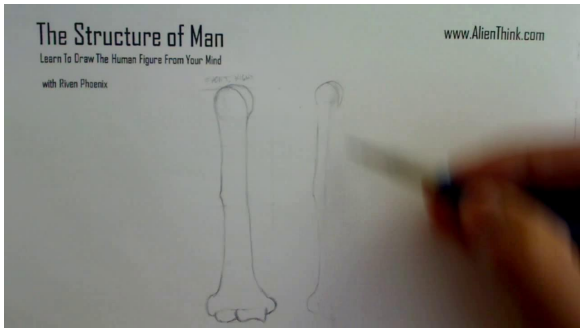
101		It's going to go like this and I know that it's going to be much more wider over here
102		in this end, right?
103		So it's going to be going in that direction like this and I'll get like this bowl joint
104		over here, going in this way.

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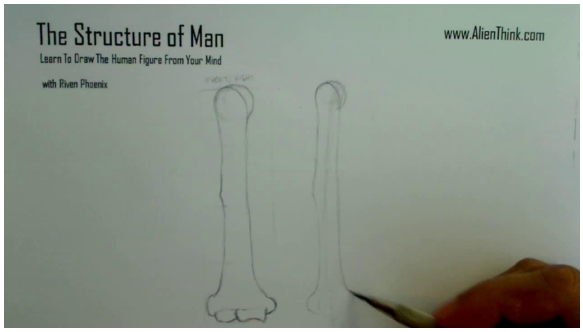
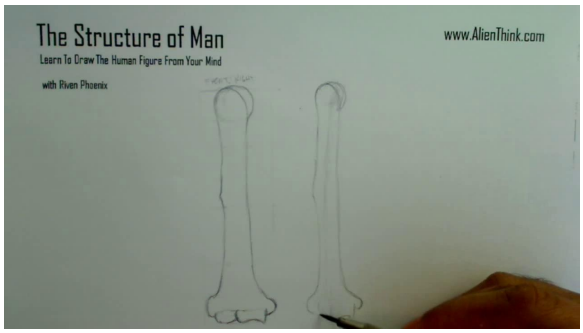
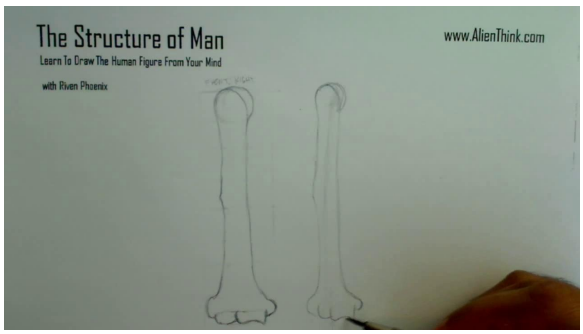
105		And then here to draw it out, I'm just going to simply draw it out like this knowing that
106		over here, when I come, I'm going to get this nut over here, I'm going to get this over
107		here and like this, right?
108		So it's like this idea here, very simple.

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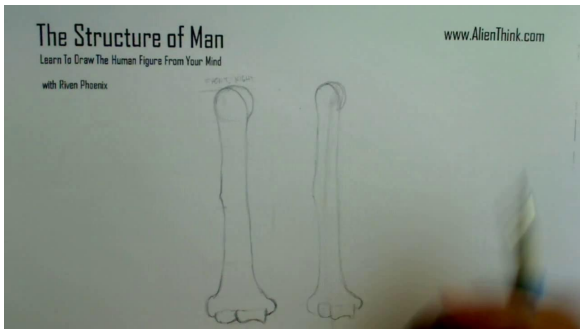
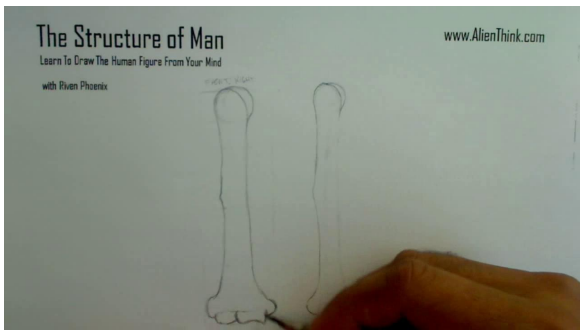
109		So once you get that, you can just erase this stuff and then fine tune it, make it just
110		a little more larger over here like this and then go down in this way, know about the
111		nudge over here and go down in this way, right?
112		It's not I'm not looking at it, it's I'm just doing this from the mind, you're just

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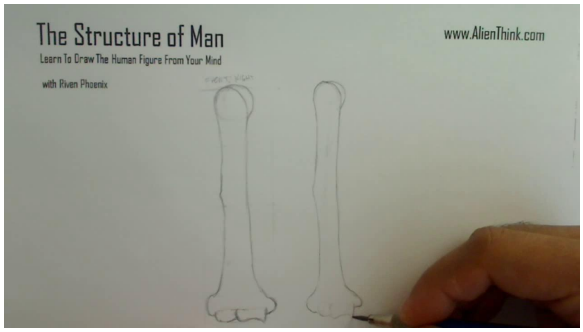
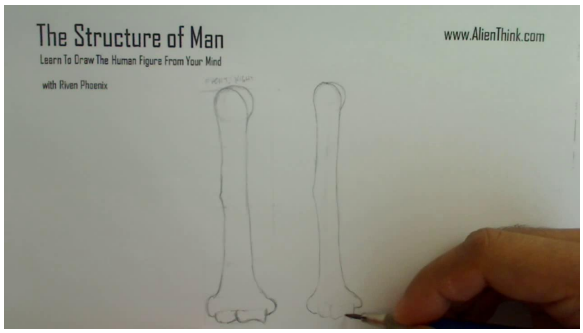
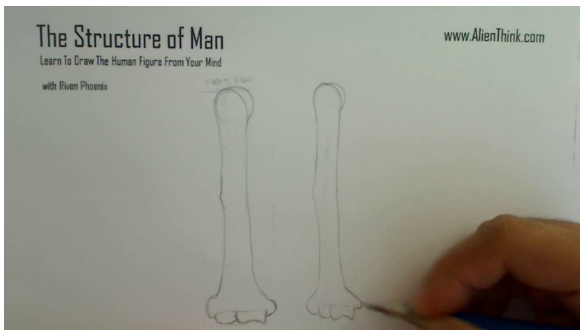
113		to show you that how simple it is to draw it out from the front, right?
114		That's the funny bone.
115		I'm going to get this over here and it's just going to be like this, right?
116		And it's that simple to draw it out from the front.

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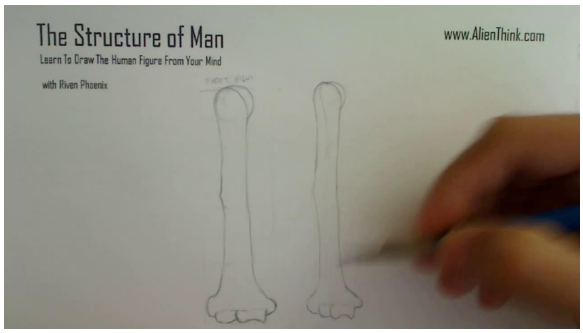
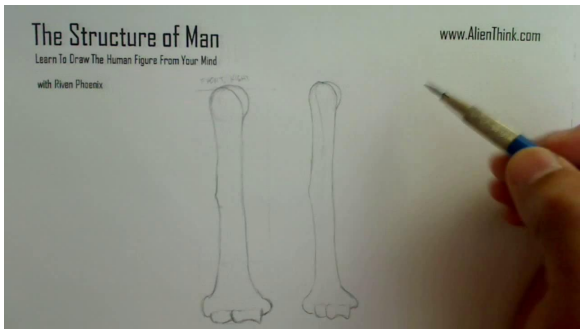
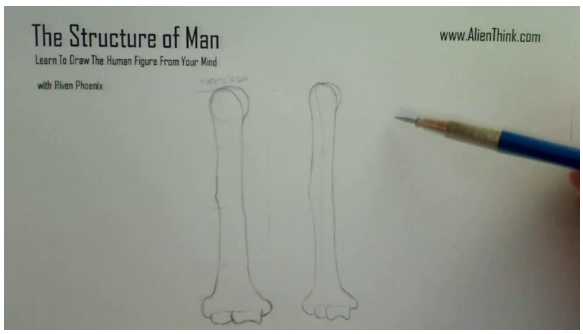
117		Okay, so since we now understand this over here as to how to do it from the front, I'm
118		going to take a look at how we can we now look at this same bone from the other side,
119		the back view, right?
120		So here we can just simply look at the formulas again.

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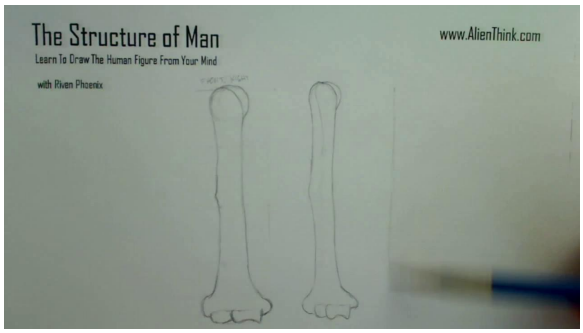
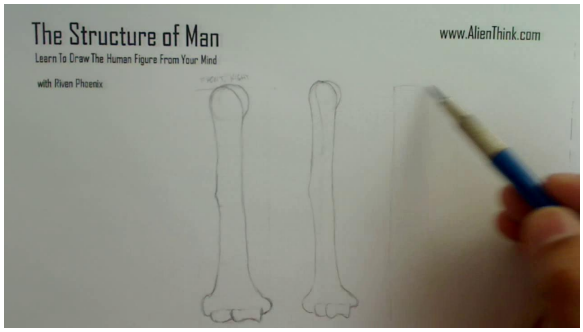
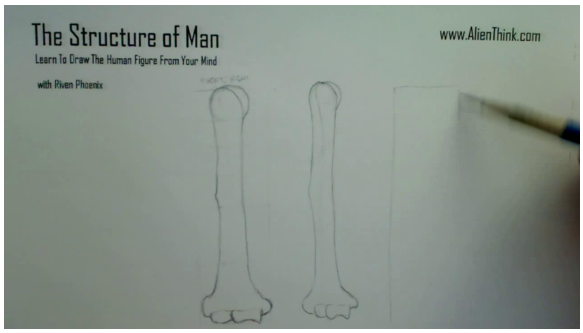
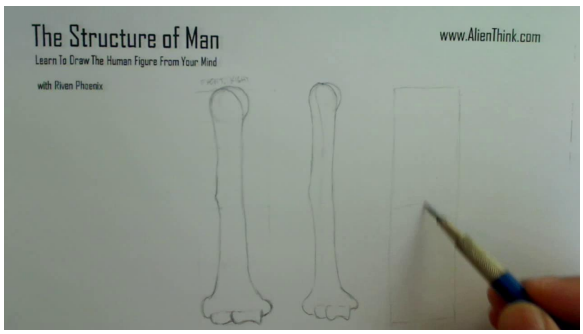
121		We really don't have to use the formulas for this, but we'll do it because we already
122		understand what's going on over here anyways, right?
123		So if we had to look at this from the the other side, it would simply be that here we
124		can just put an x here, right?

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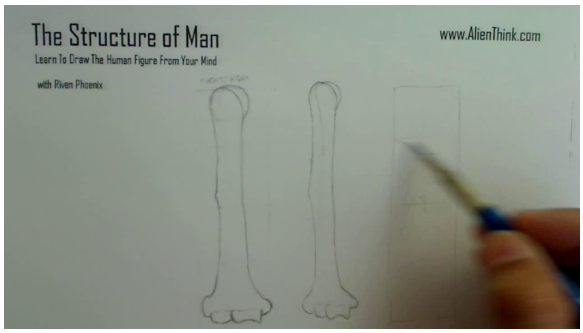
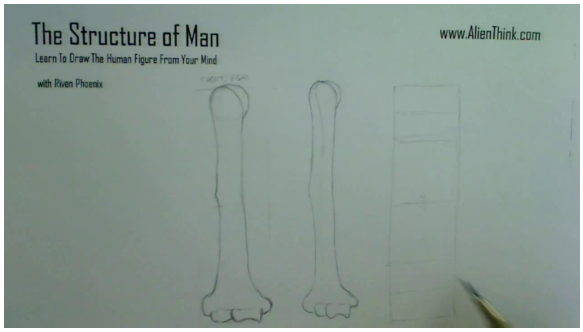
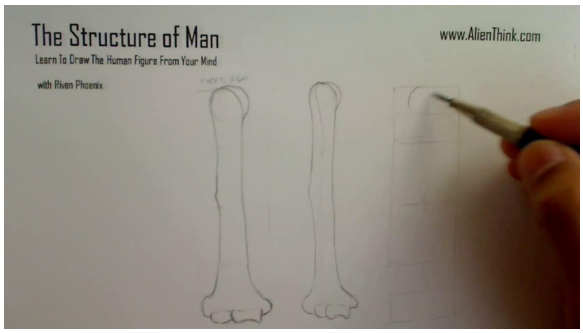
125		We can divide this in half over here again, the same concept, right?
126		I'm going to be rough with it because we'll be no need for this, but here now when we
127		draw it out like this, what happens is that we begin to understand, okay, well, if this
128		is going in this way, this means that this curve is now going to go towards us, right?

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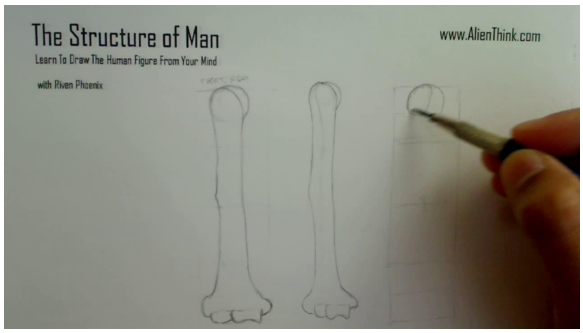
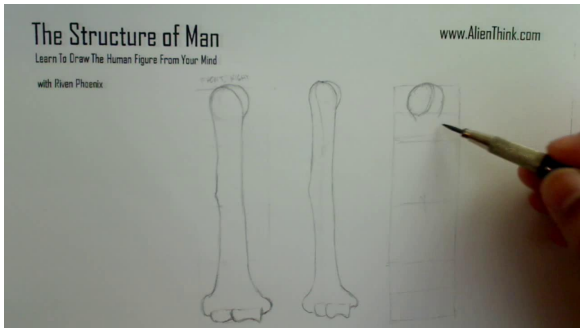
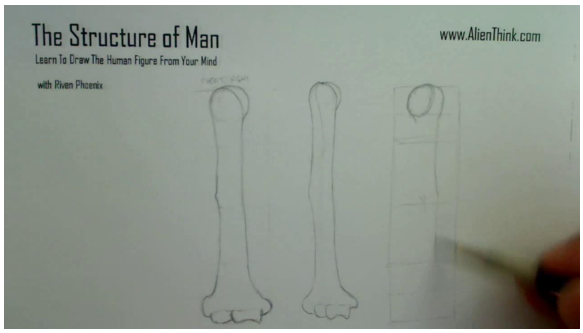
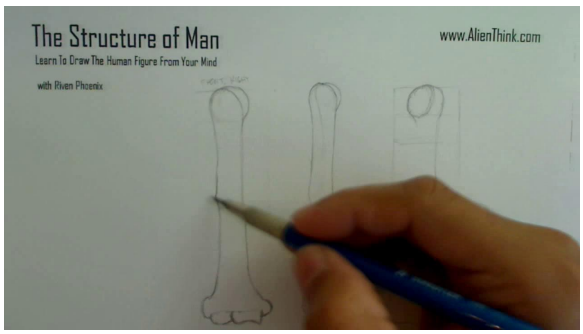
129		It's coming towards us in this idea over here, and this guy is just going to be here.
130		So obviously this means that over here we're going to get that nudge again, and then it's
131		going to go down in this way, right?
132		So notice where the nudge is, the nudge is here, I know that it's just going to be that

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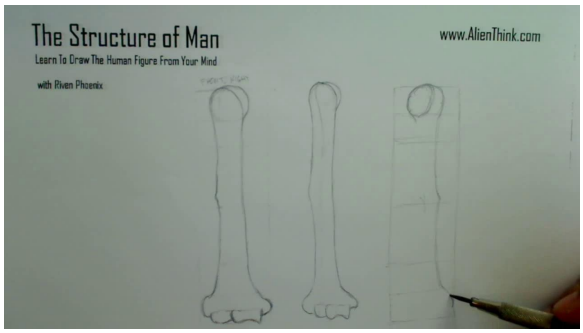
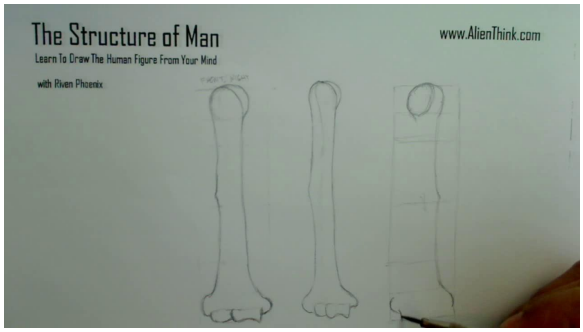
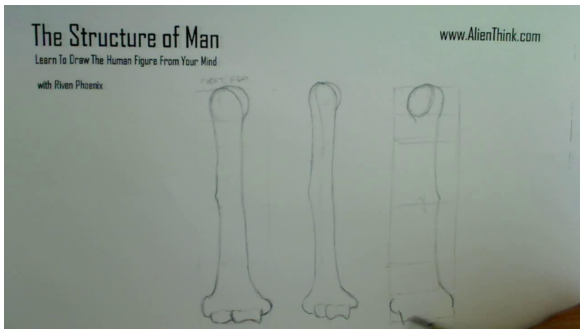
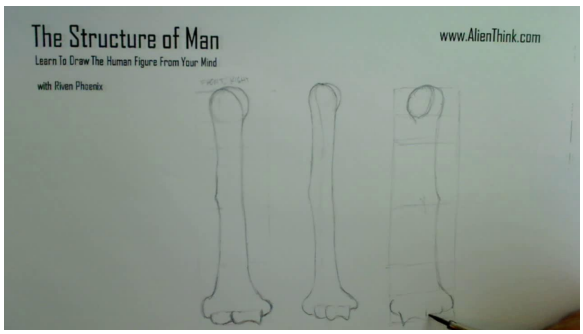
133		bigger end of the bone, and I'm going to get that funny bone over here, and it's going
134		to be coming down in this way.
135		So this again is the same thing as this, right?
136		You're just going to get the same conceptual idea over here.

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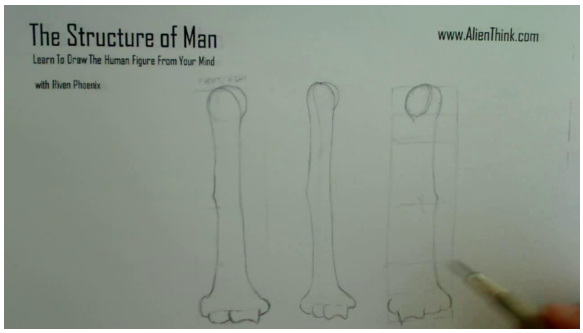
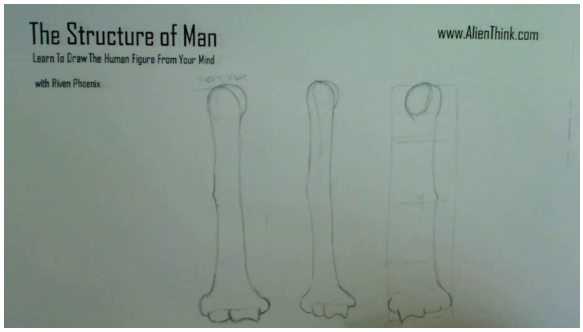
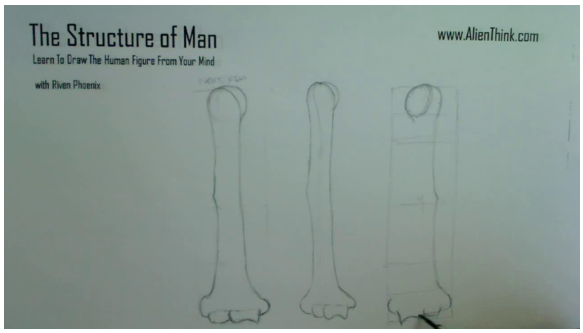
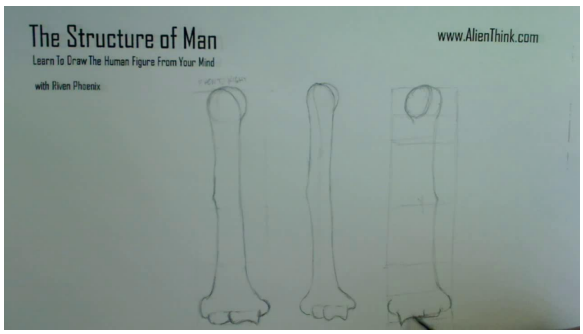
137		So what happens, the only difference here is that where this is like this over here
138		in the front, in the back actually what happens is that this just becomes more bigger like
139		this, right?
140		So this whole thing is like a fluid thing, and then here you're going to get this big

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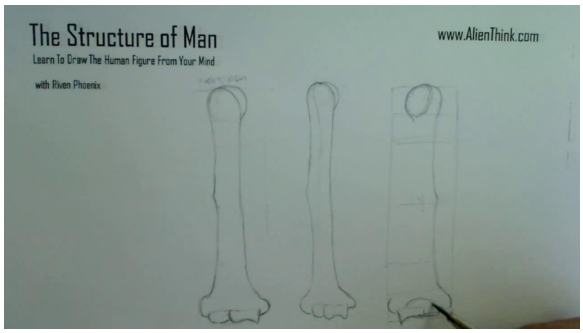
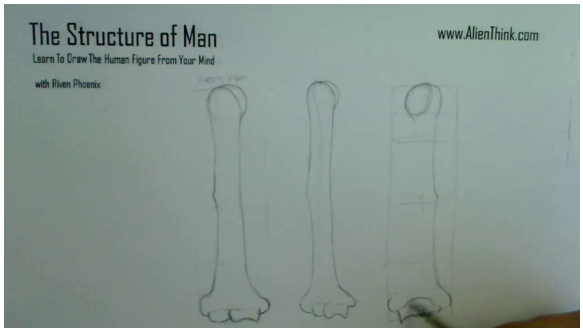
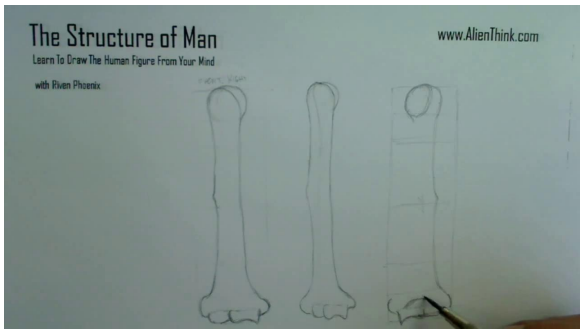
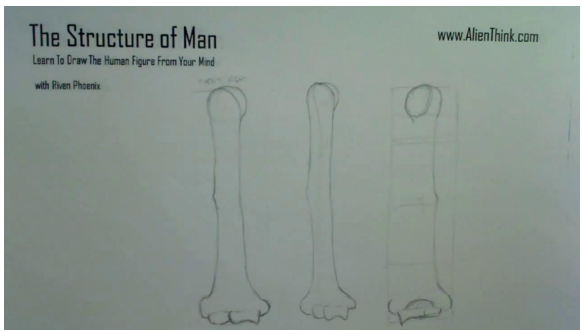
141		gap here.
142		It's not a whole, it's like this big thing here that allows the other bone that we're
143		going to look at to fit to get locked.
144		This is why you can only straighten out your arm, right?

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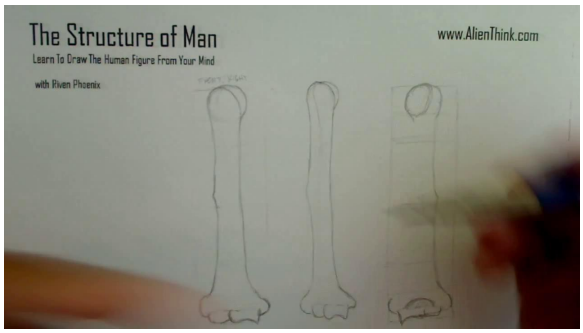
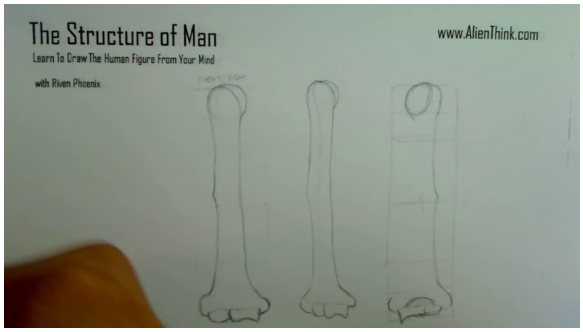
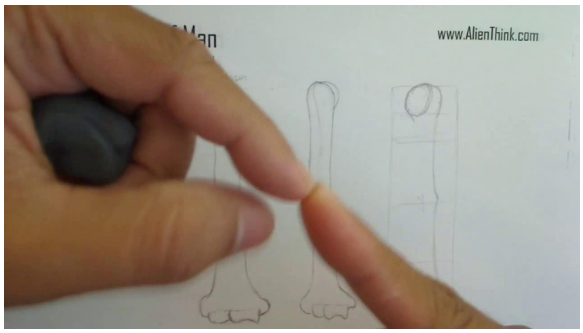
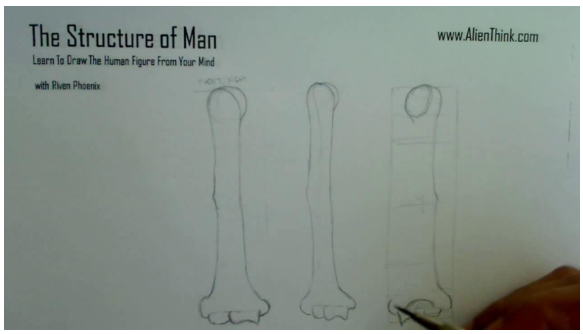
145		If this was your, let's say this was the forearm, the upper arm and the forearm, right?
146		And I can stretch my bicep like this, but when I straighten out my arm it just gets locked
147		and over here is because it's got this notch here, right?
148		So this, basically this point here is the same point over here, and it's just going to

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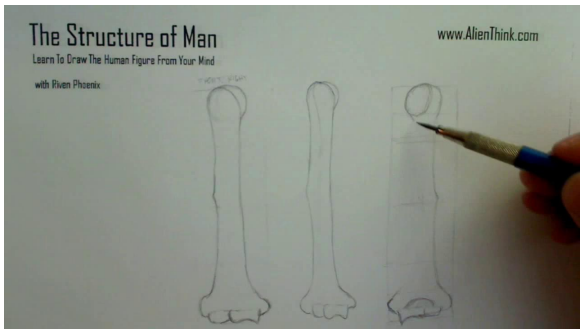
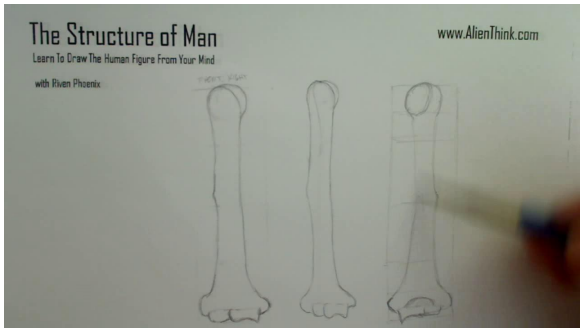
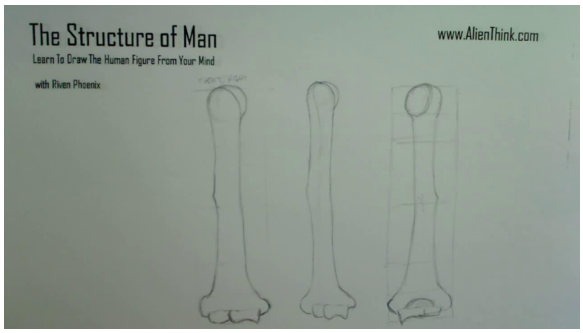
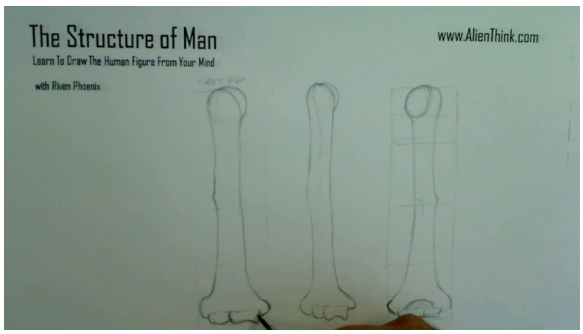
149		again go down in this way over here.
150		Right, there's really nothing more to it, we just sketched it out much more faster, right?
151		So the only difference here is that you're going to get one, two, you're going to get
152		like these one, two, and three bumps, you know, over here you're really just going to

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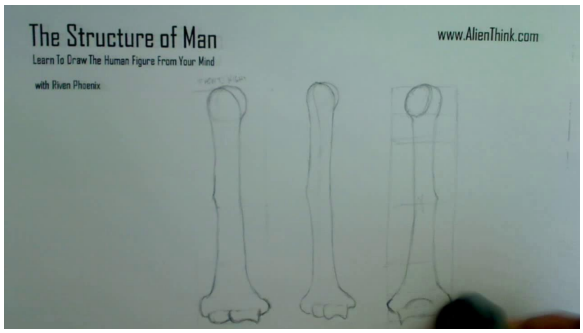
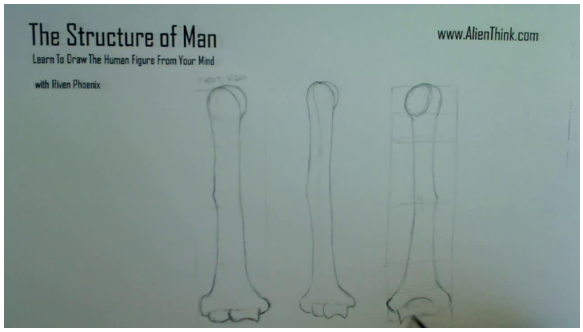
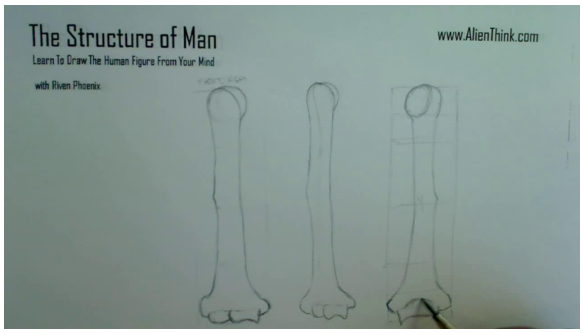
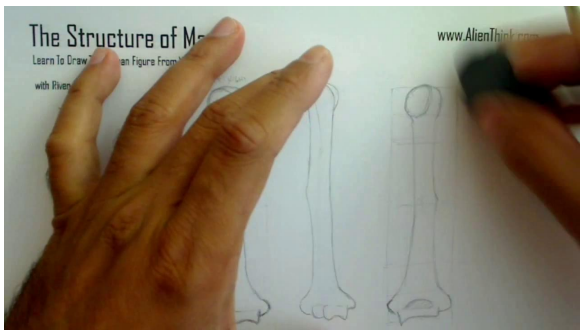
153		get two bumps over here, right?
154		It's a little different on this side, you're going to get it like this and you're going
155		to get this nudge over here, right?
156		So now we can just erase this part over here and make this a little better looking, right?

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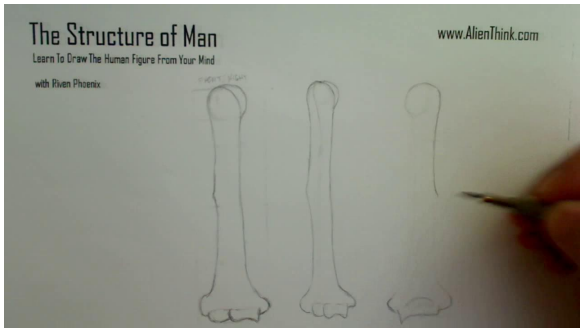
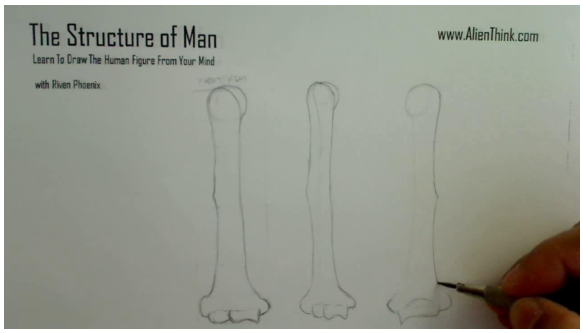
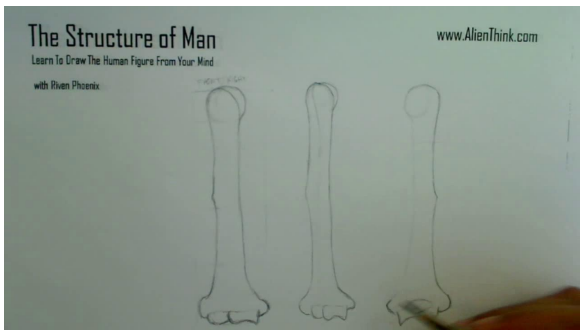
157		So it's nothing more than the same concept that this is really just going like this in
158		this direction over here, you're going to get that nudge.
159		Then over here I'm really going to get this, there's an idea over here and this is going
160		to be like this and I'm going to get this point over here, right?

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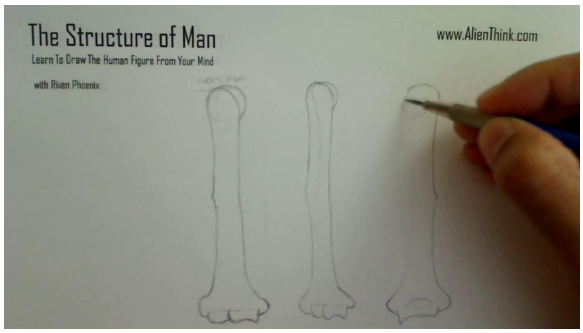
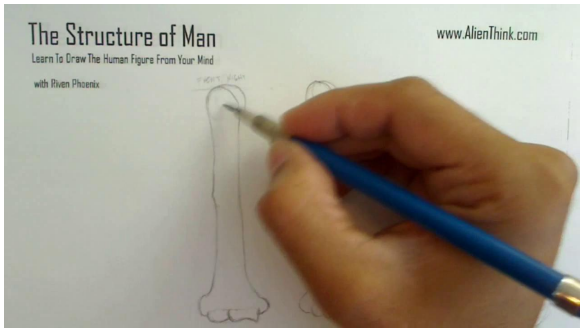
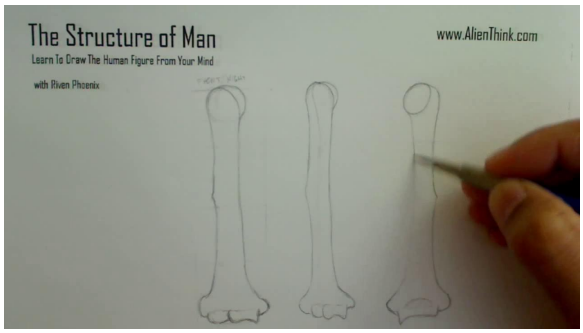
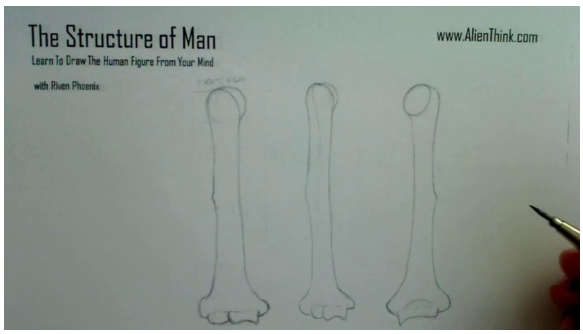
161		And this is going to be a very soft, very fluid ball joint over here, right?
162		It's looking away from us, this is going to be looking at us from the back, right?
163		And this is now just going to go down all the way over here and it's going to be done
164		with it, right?

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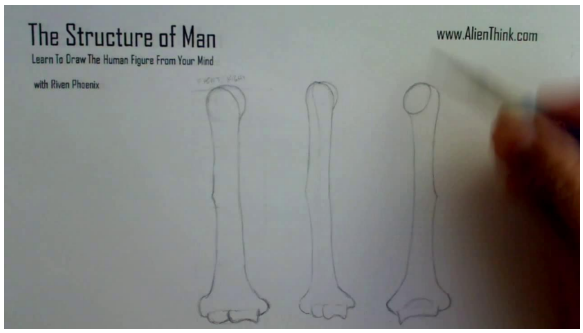
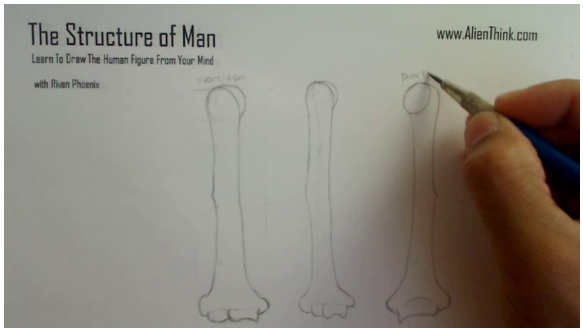
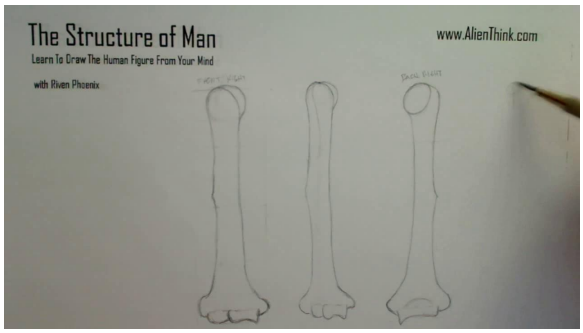
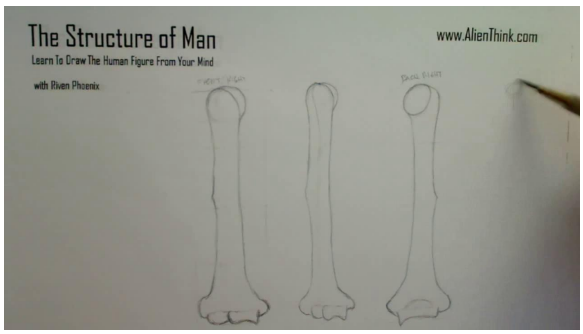
165		So obviously now if we had to, so this is the the back, this is the back, right?
166		So if we had to draw this free hand, it's going to be nothing more than doing the same
167		thing.
168		Let's see if this was the gesture system and we had drawn like this line here, right?

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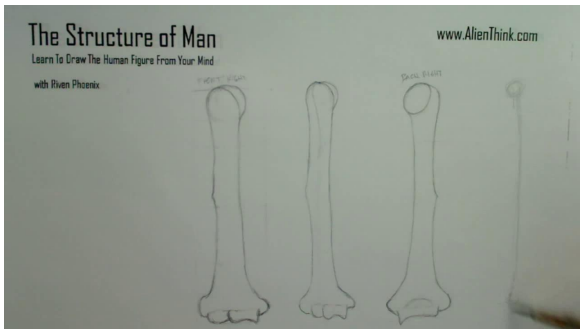
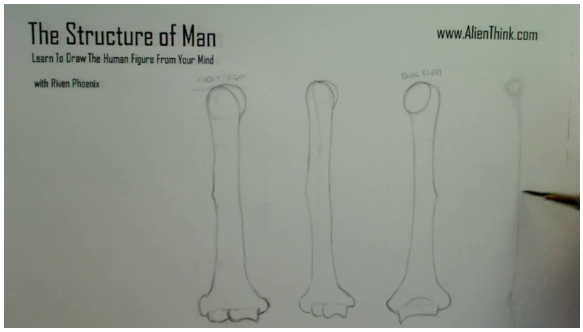
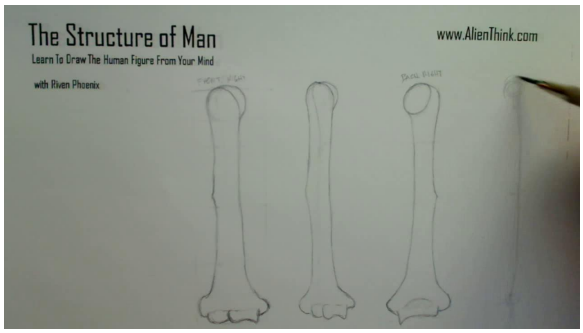
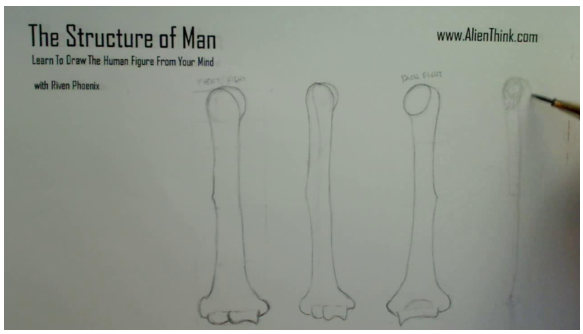
169		And then our hand was going down in this way, we can just simply just look at this and
170		say, okay, well, this is the center of it anyways.
171		I'm just going to first draw it out like this knowing that it's going in this direction,
172		right?

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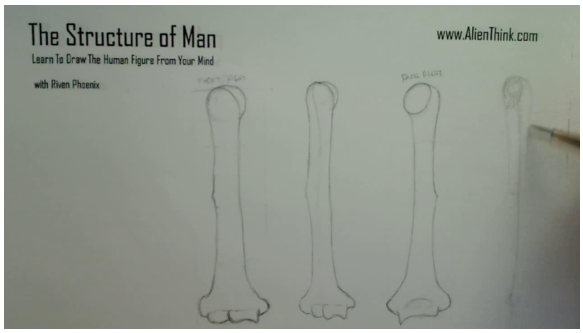
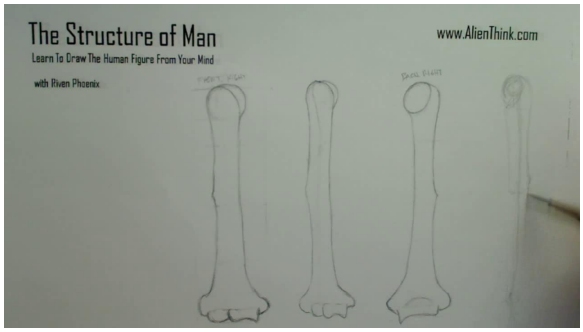
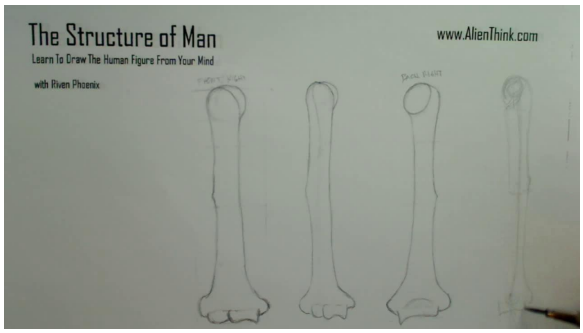
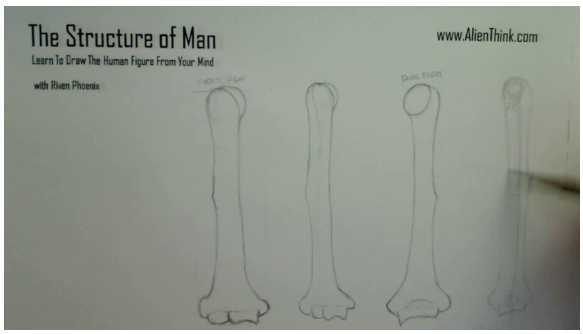
173		Knowing that this nudge here really is above the center line and it's going to be here
174		then it's going to come out like this, just really, and going to get it this way.
175		I know that it's going to be much more wider obviously in the bottom, right?
176		So we get like the basic idea of it over here first, right?

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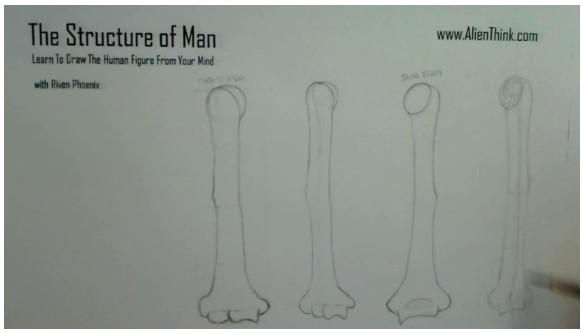
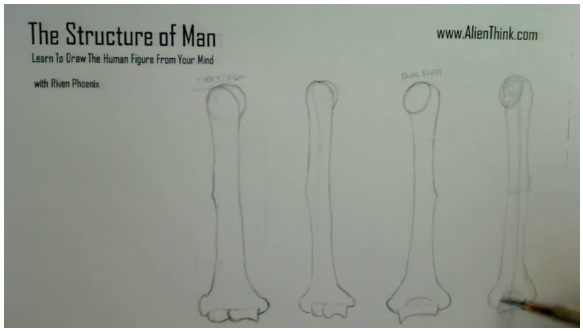
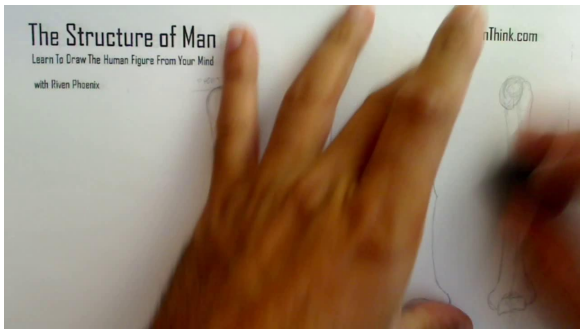
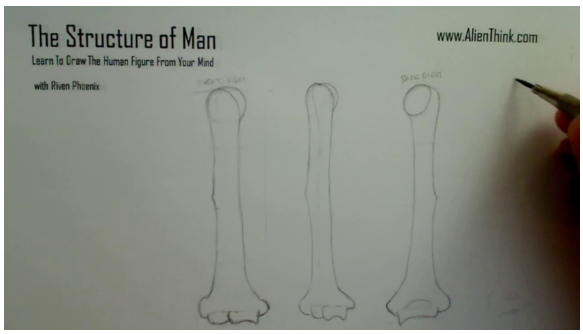
177		We first try to understand the idea with these lines, then one and then we're going to
178		get that little nudge over here, right?
179		So now we can just erase this and just use the anomalies in the back to put this whole
180		concept together.

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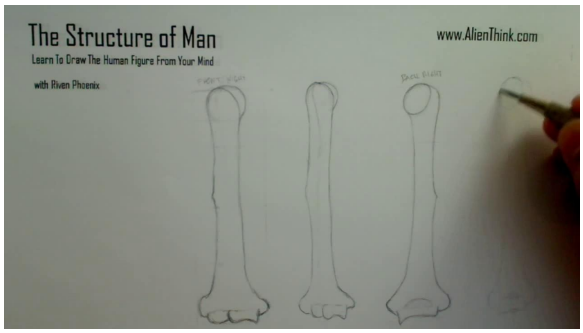
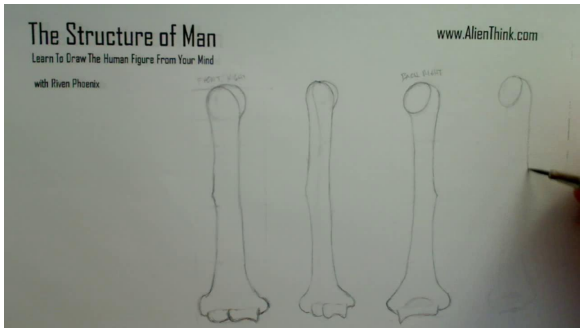
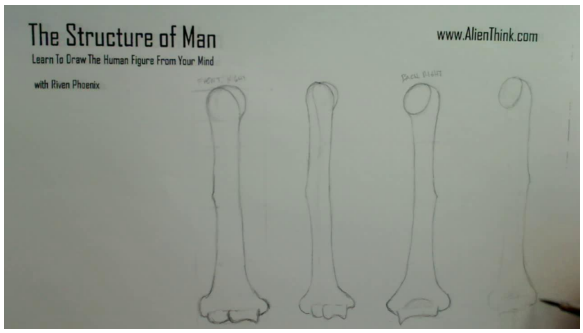
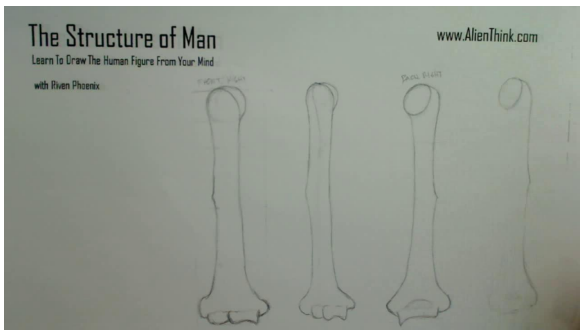
181		So here I'm just going to get this ball joint over here and then over here, we're going
182		to get that nudge again and then this is going to come down this way over here.
183		This is wider, right?
184		This is shorter and when I get this, I know that I'm going to just get, it's going to

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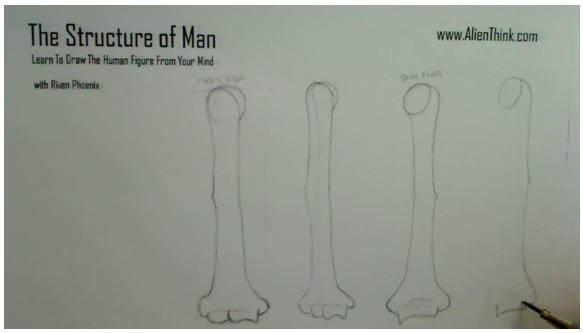
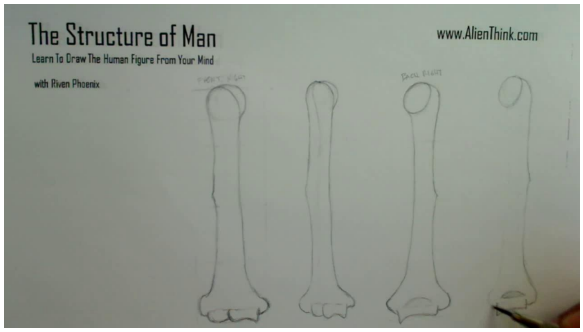
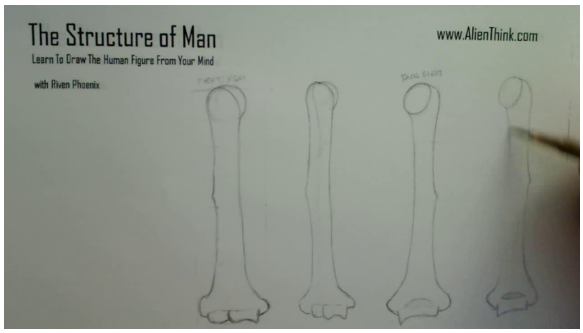
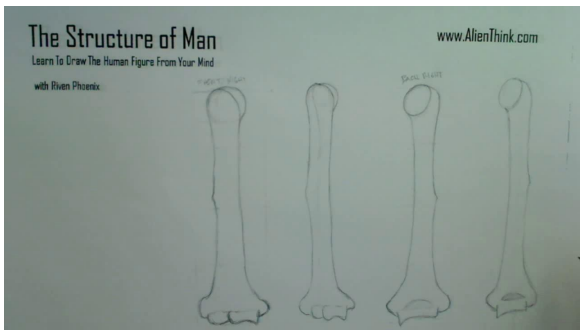
185		be like this fluid thing over here, we're going to get that nudge in here like this
186		ditch and going to get this pointy area over here, right?
187		And that's really all there is to it from looking at it from the back.
188		Okay, so now let's take a look at what is really there to understand from looking at from

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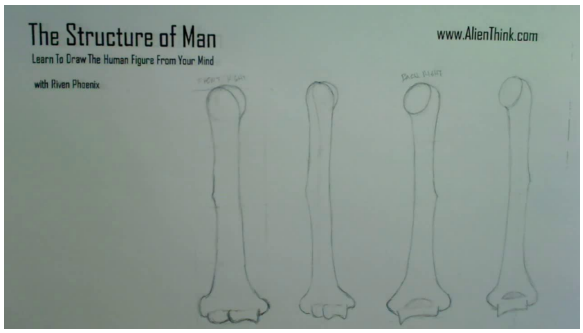
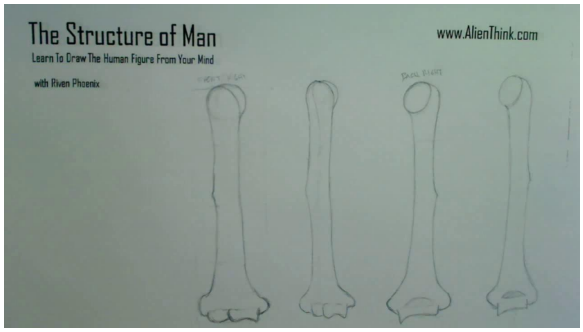
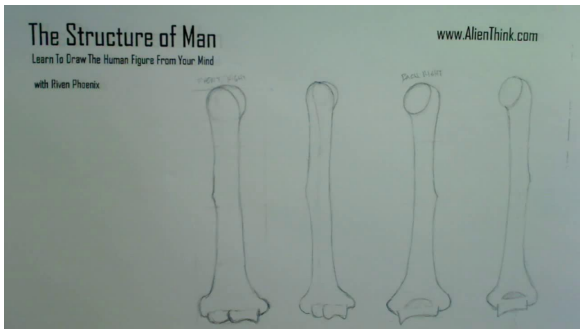
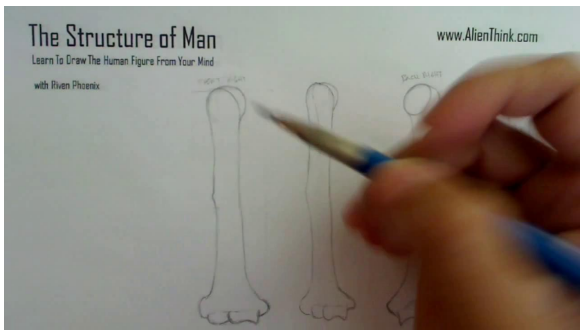
189		the side.
190		Right, so here's where there's going to be a difference.
191		So basically how we had understood about the tibia, the small angle in the front of the
192		tibia that we were going to be aware of, if we look at this from the side view, right?

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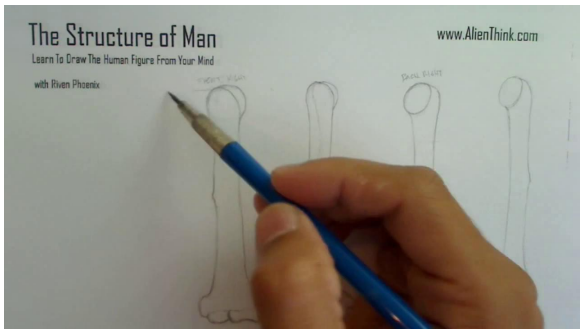
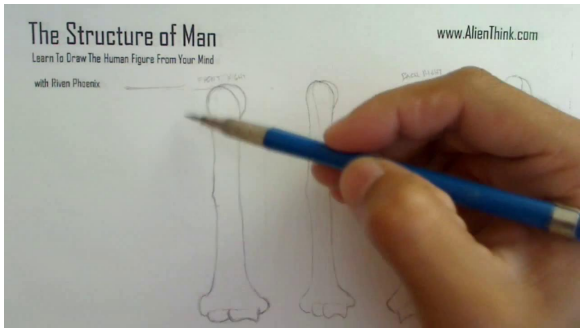
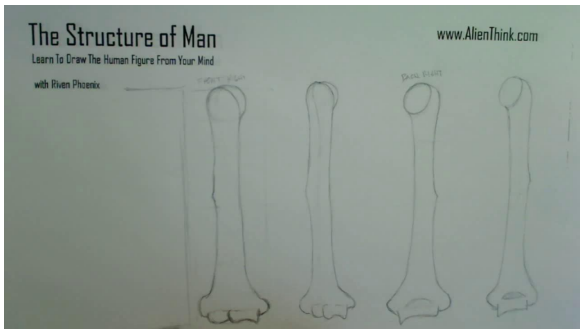
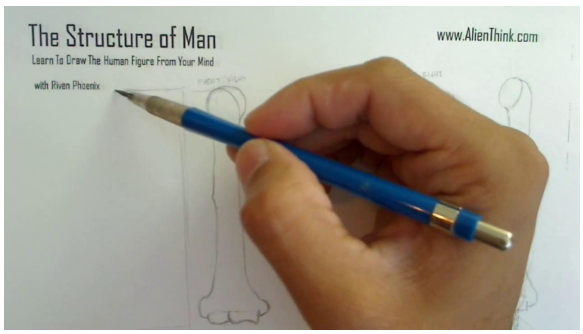
193		So here I'm just going to draw it over here from the side, I'm going to put the formulas
194		down again because this now is like a characteristic of the humorous bone that you just want to
195		keep in mind.
196		When we get into the muscles, it will actually play a role also in how to understand it.

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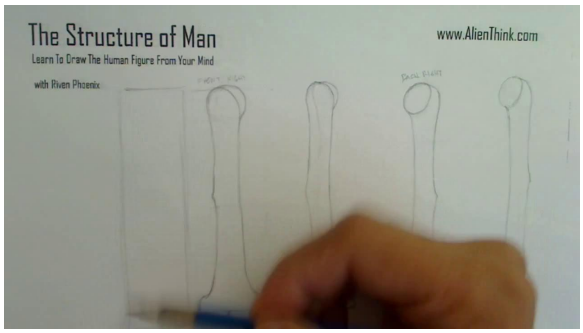
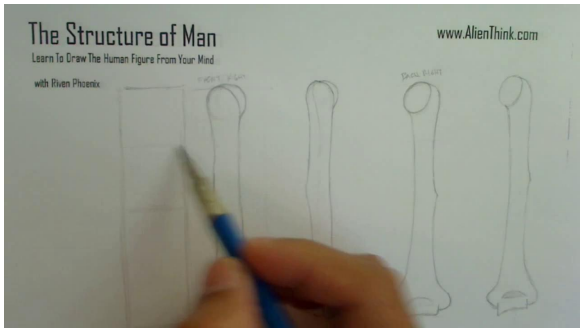
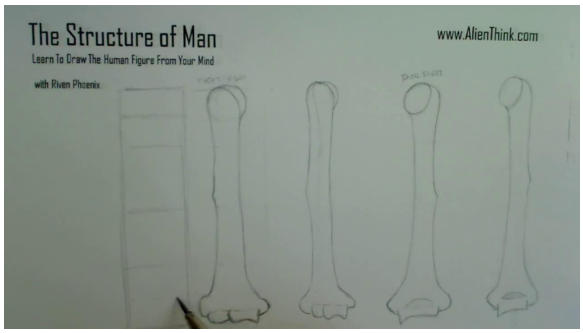
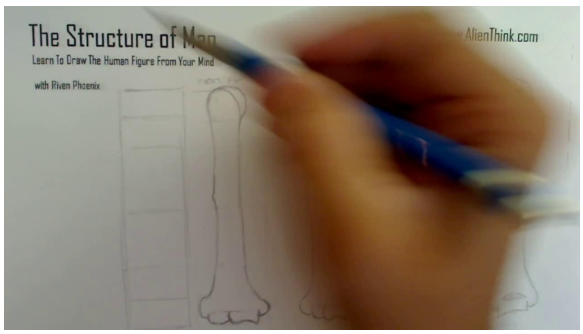
197		So I'm just going to draw it like a rectangle again, right?
198		And over here I'm just going to do the same thing, the division over here, remember these
199		formulas are meant to be forgotten, we only want to understand it in the free form idea.
200		So in this sense, since we're really now going to be looking at it from this direction,

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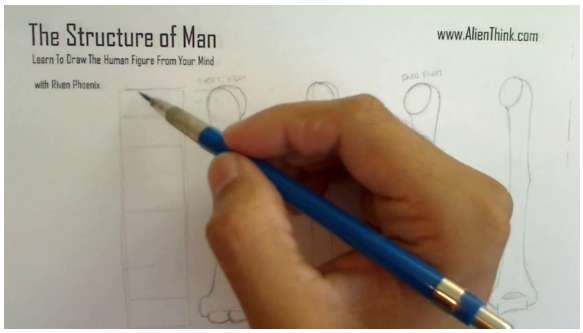
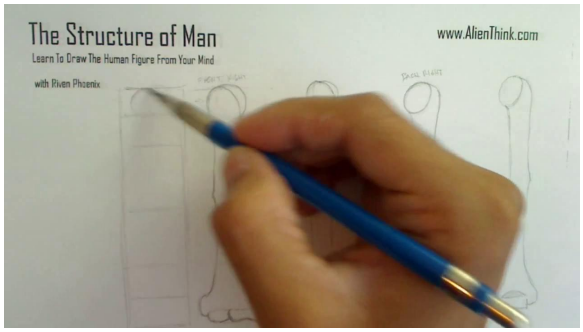
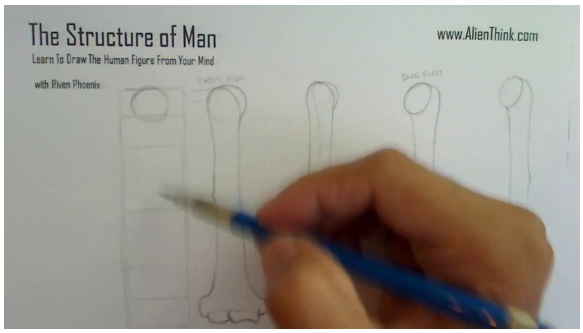
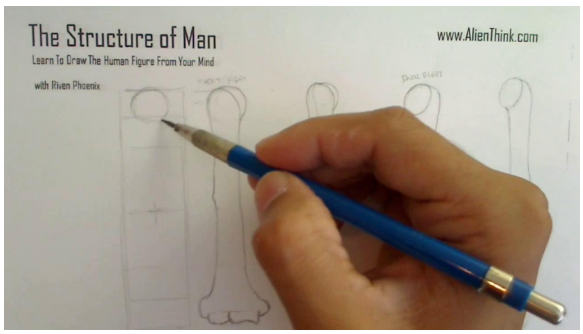
201		really there's nothing more to understand about this then, then it's just for us.
202		Now from the side, it's just going to be like this ball joint like this, okay?
203		And where this is on the center, just know that there's a plus sign over here.
204		So basically where we get this, see over here, what happens over here is that where you

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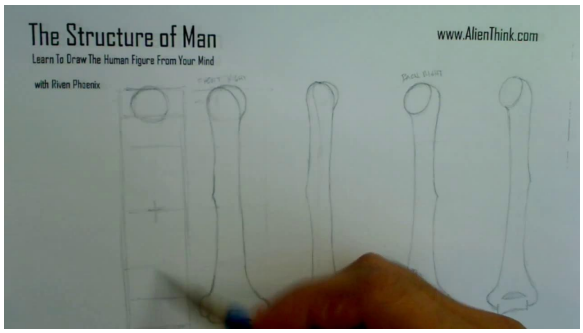
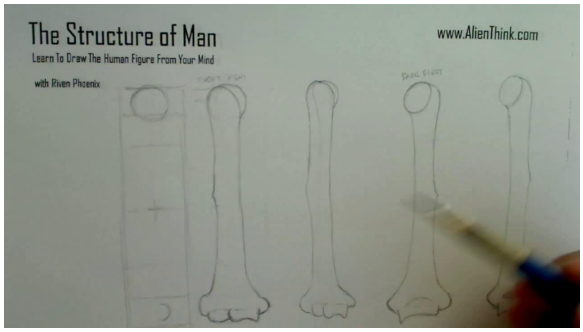
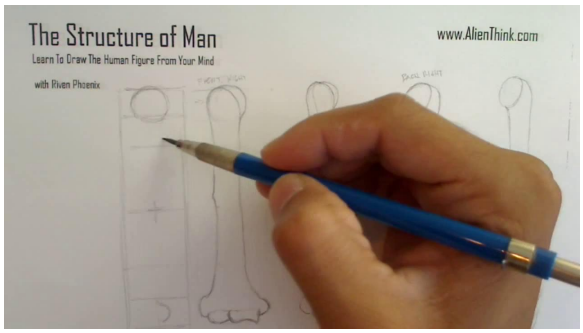
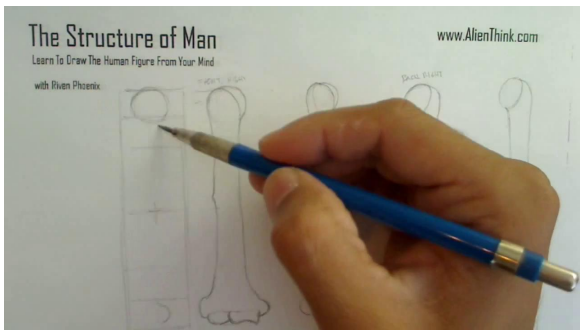
205		have this center line, you're going to start to get kind of like imagine this to be like
206		the femur of the leg that it's going to do the same characteristics.
207		But over here, when it's on this side, it's going to end up over here, right?
208		So what happens is that when this guy comes over here, it's going to pass through the center

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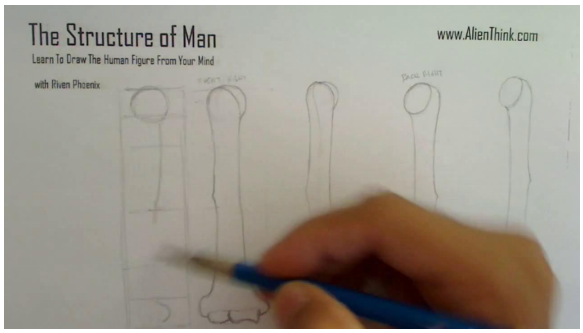
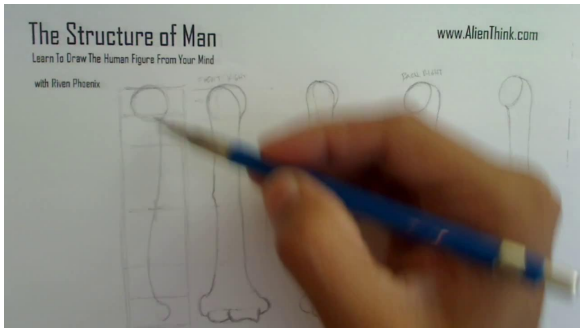
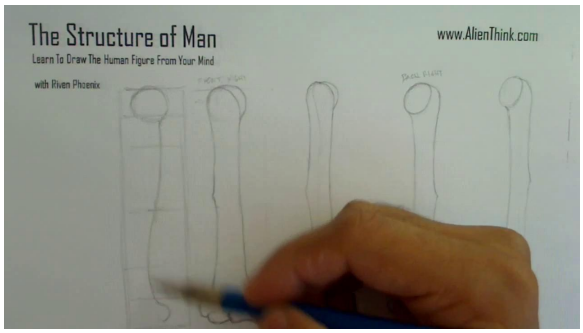
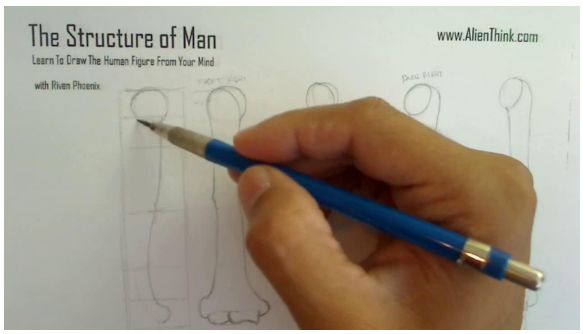
209		line and then it's going to curve, right?
210		This is an important characteristic of this humorous bone as to what it does, right?
211		Because what will happen is, let me just finish this off before I give more information
212		on this.

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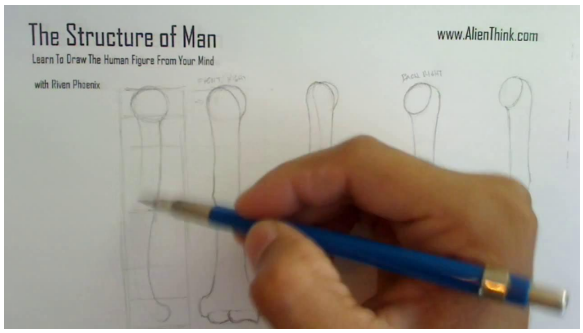
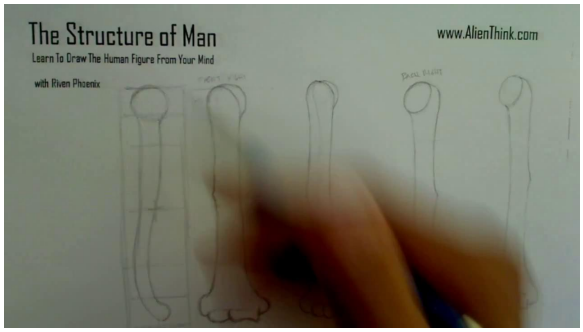
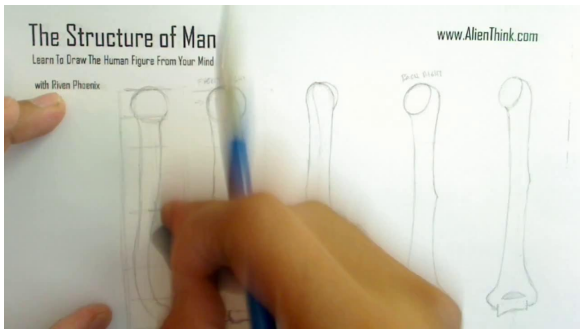
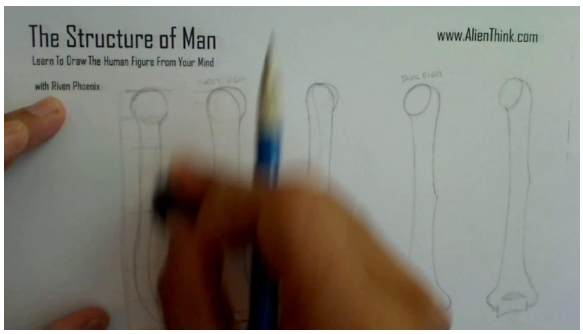
213		So you just wrap it up by just making the bone just look like this, right?
214		So obviously we know how we can now draw this free hand, right?
215		It's just a common sense.
216		So let me just erase this first and fix this up a little bit and we'll talk about some

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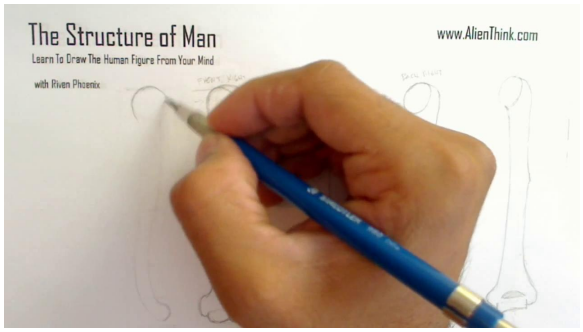
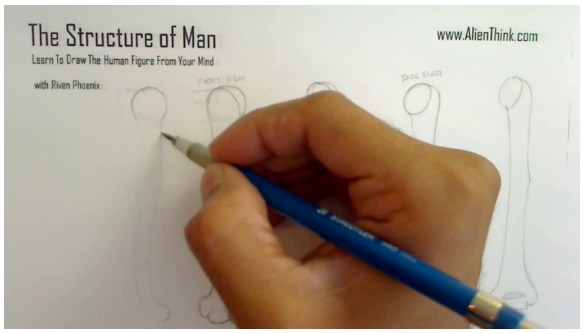
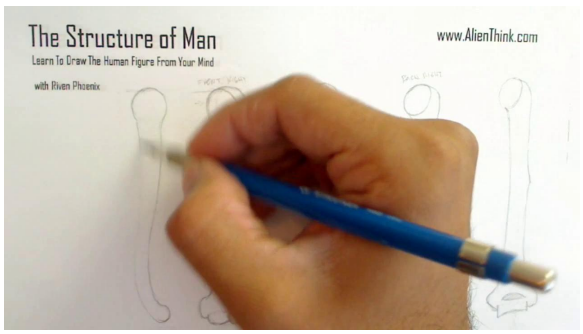
217		of the important things to just keep in mind about this bone over here, right?
218		So from the side, it's going to be this way.
219		We know that it's going to be curved in over here like this and then it's just going
220		to come down in this way over here, right?

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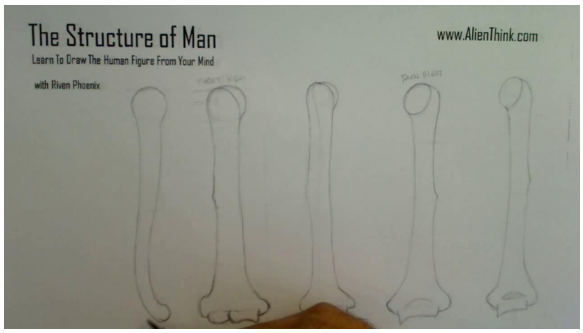
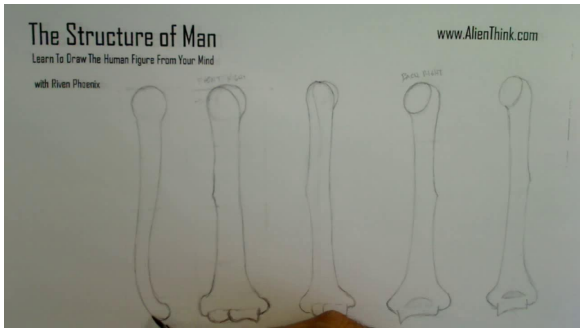
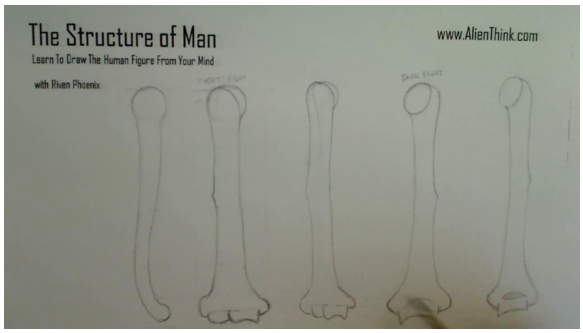
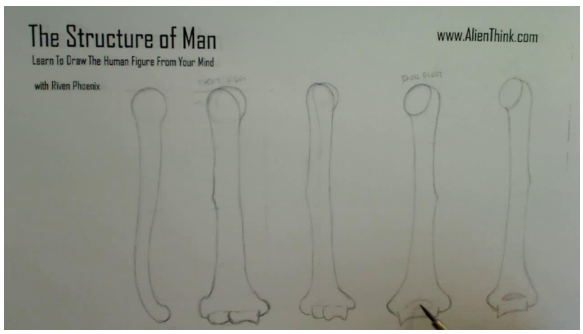
221		So basically when we get to the other bone, the lower part, we're going to get a bone
222		that's going to remember over here, there's a nudge here.
223		See this?
224		There's a nudge here.

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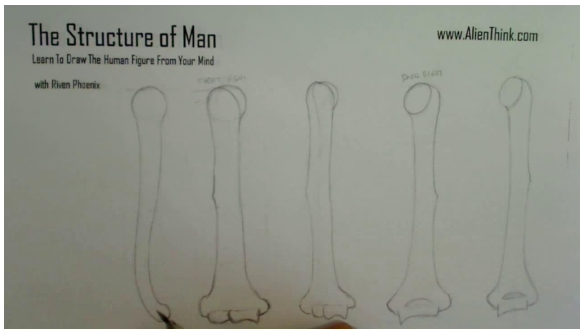
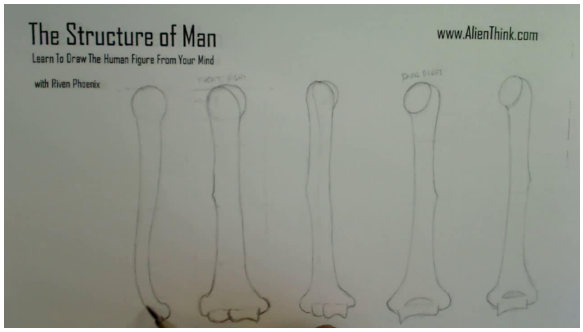
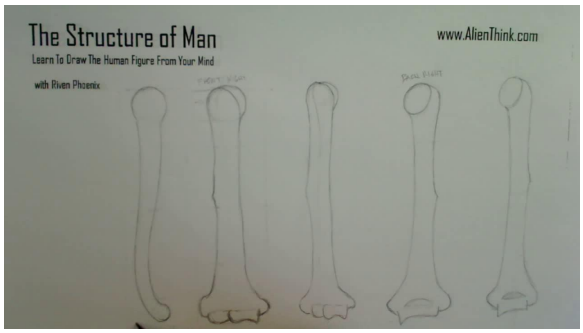
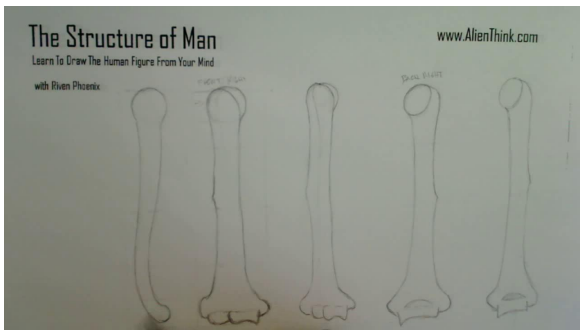
225		It's actually embedded inside over here.
226		This is what's going to lock the elbow, right?
227		The elbow bone is going to be here, right?
228		So this idea here, you begin to understand, okay, that the triceps are really going to

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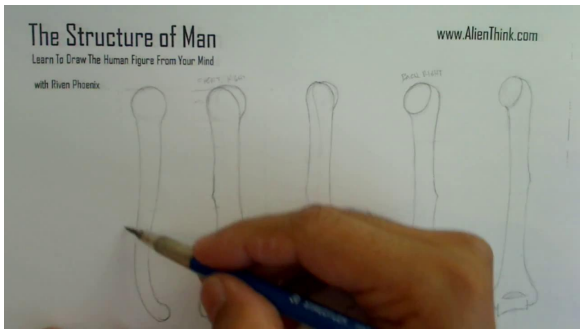
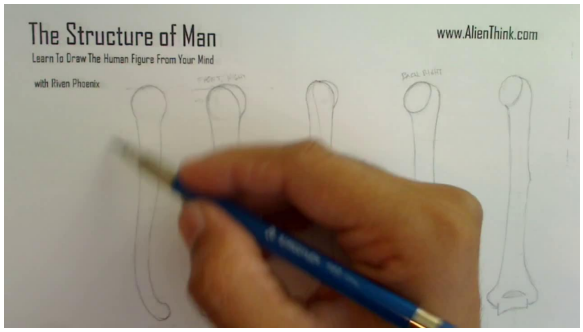
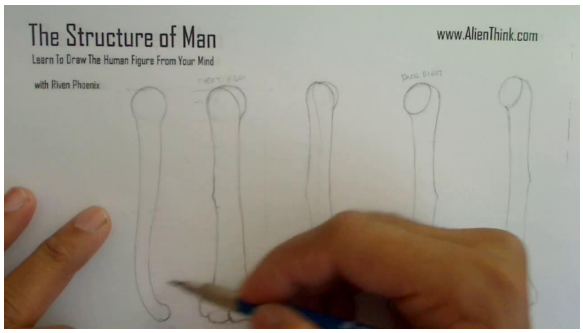
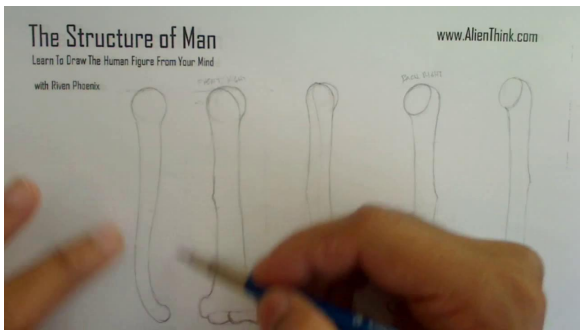
229		be butted up against this, right?
230		The triceps are going to go here and then when the biceps come, this is why you have this
231		base over here, right?
232		So really in the basic shape forms is what this will give us the understanding of it later

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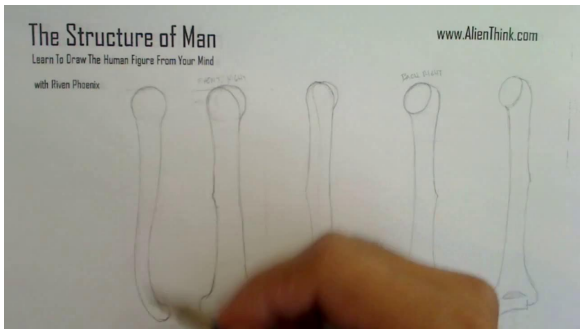
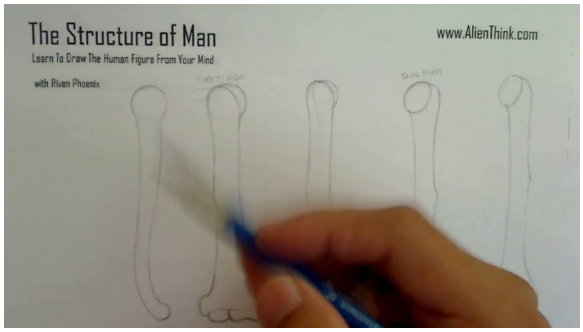
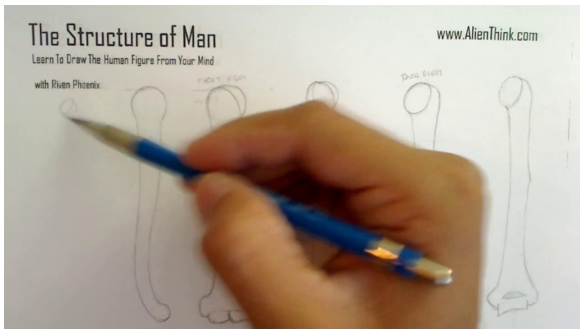
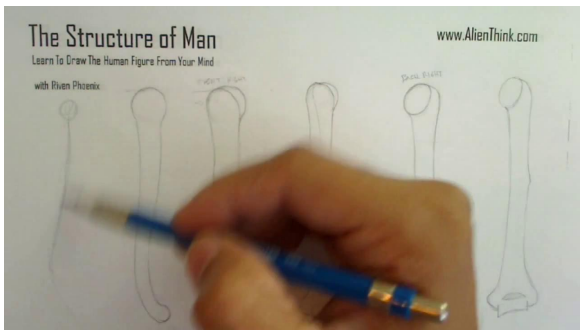
233		on when we can understand that, right?
234		So obviously to draw this out freehand, it's going to be nothing more than, okay, well,
235		if this was my gesture system and let's say if I had drawn this, like this, you see,
236		like in the gesture system, now you'll begin to understand, okay, like some artists, when

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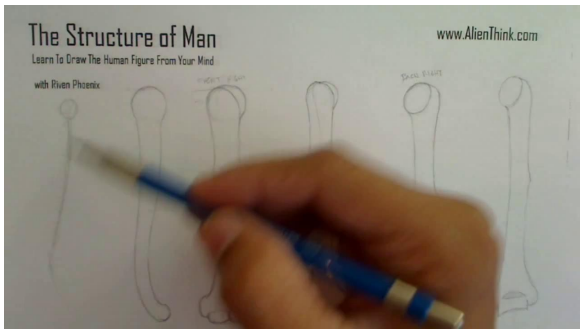
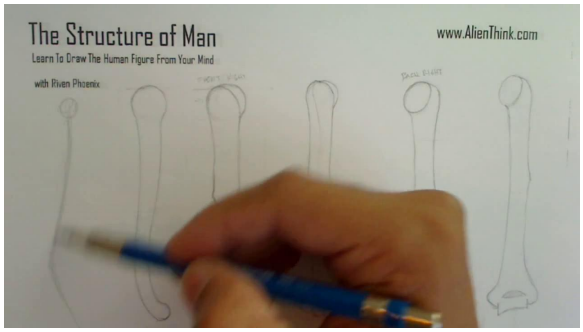
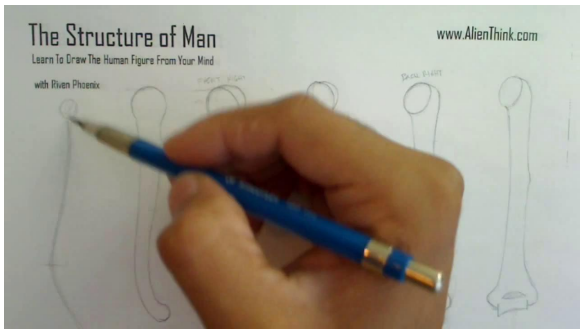
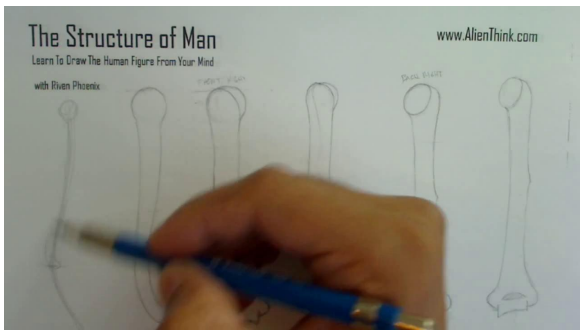
237		they're drawing it out, they'll feel this through like a whole flow system because they
238		know it's going in this direction, let's say this was the arm going in this way, right?
239		So from the side view, we already know, okay, well, I know that this bone is really just
240		going to go like this, right?

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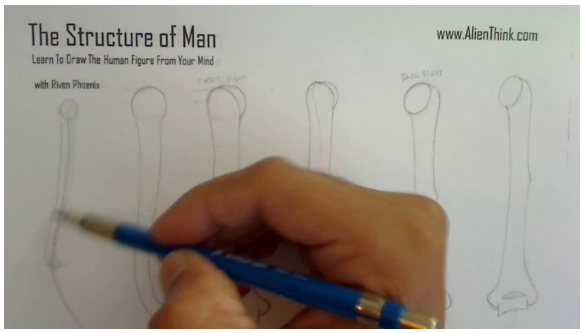
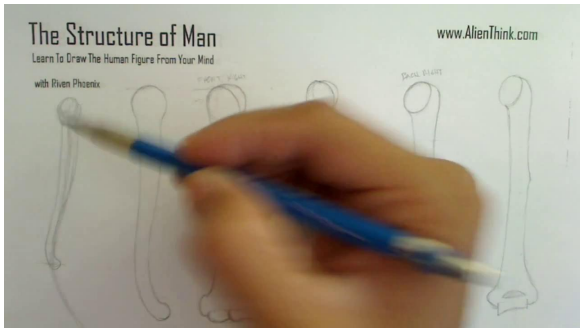
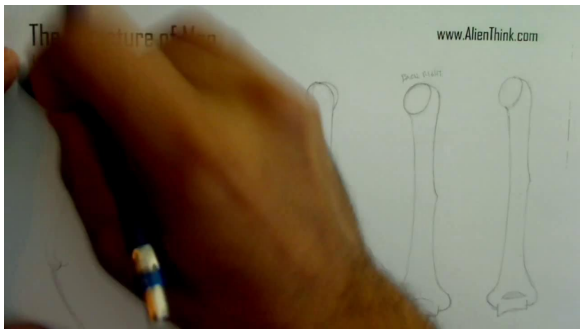
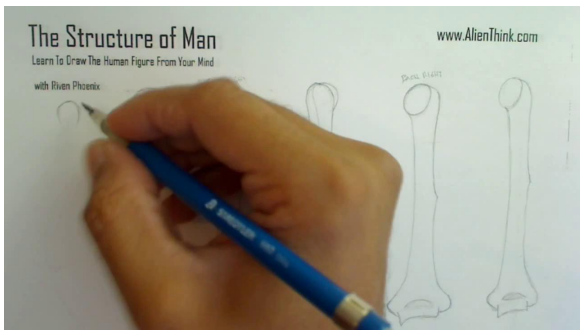
241		It's going to be like this in this sense, it's going to have like this curve and it's
242		going to have this ball joint, right?
243		So here we can erase this and just look at the anomalies in the back and be able to use
244		that idea again and again proving that not about the drawing process and being proving as

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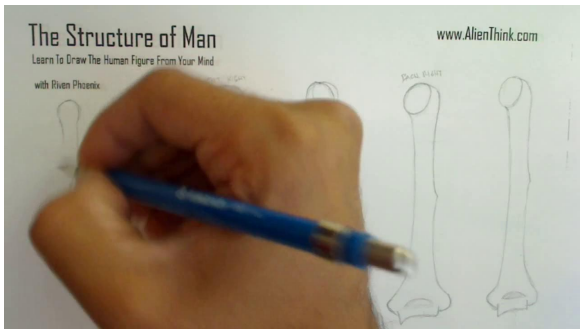
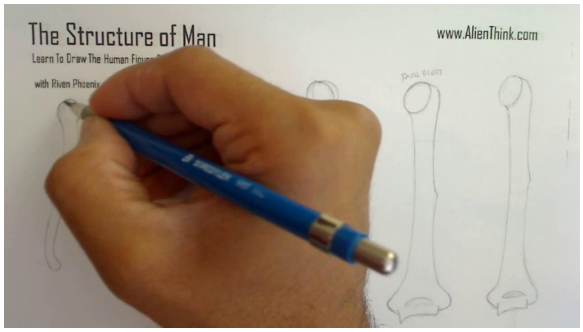
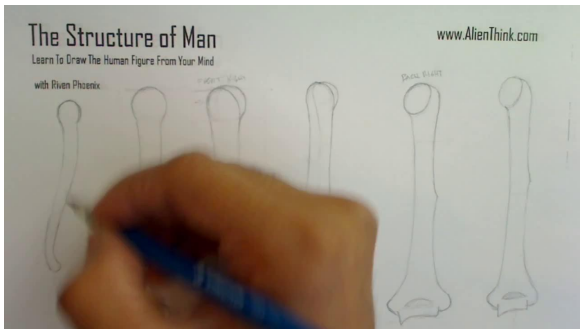
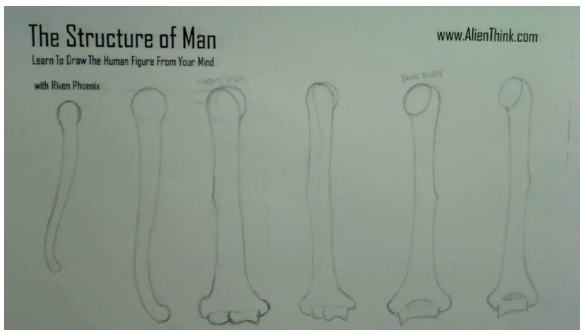
245		to how we can just quickly let go of the formulas and be able to put these bone structures together,
246		right?
247		So this is the humorous bone from the side, okay, so I'll see you in the next lesson
248		Thanks.

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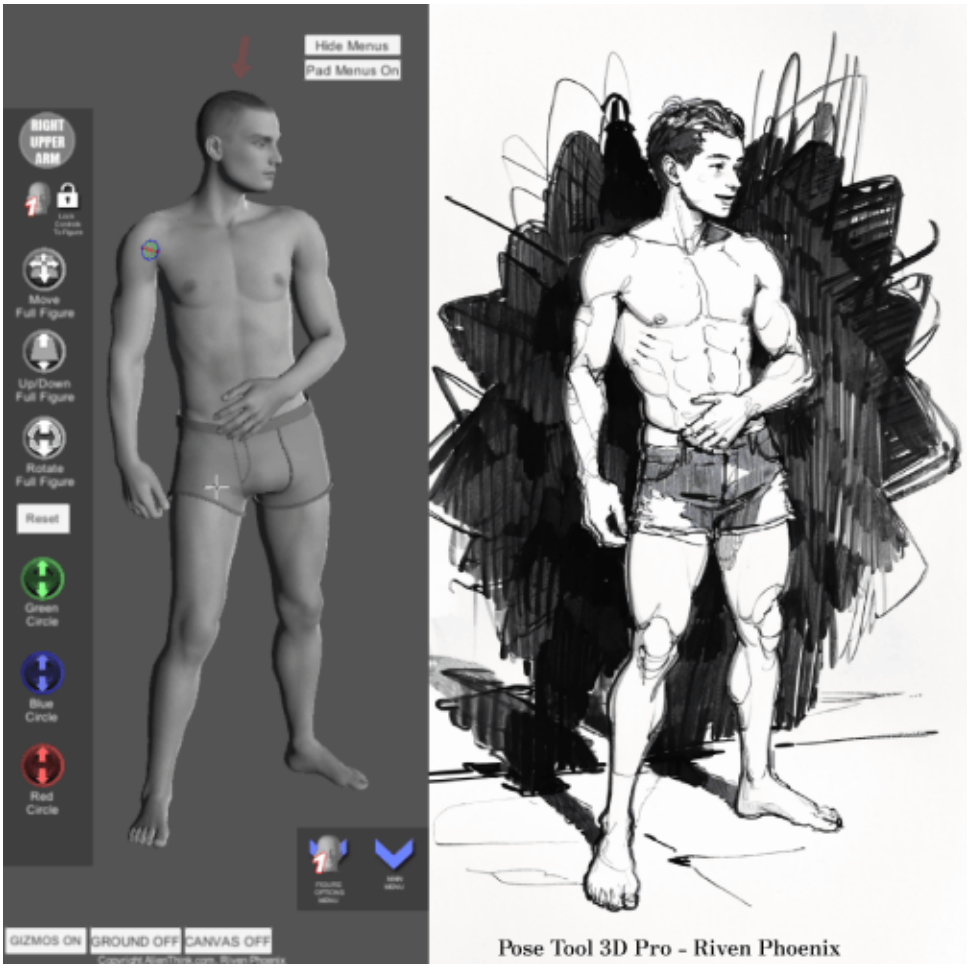

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